

CORPORATION OF MADRAS



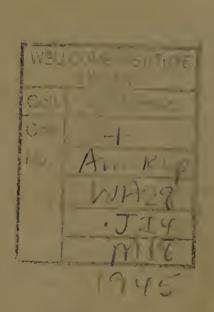
## HEALTH DEPARTMENT

## ANNUAL REPORT

FOR

1945

Printed at
THE MODEL PRESS, MADRAS
1946





### Corporation of Madras

## HEALTH DEPARTMENT

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## HEALTH DEPARTMENT REPORT FOR 1945

#### INTRODUCTION

I submit herewith the report on the public health of the city for 1945, and in doing so it is my duty to place on record the valuable services rendered in the cause of the public health of the city by my predecessor, the late Rao Bahadur Dr. C. S. Govinda Pillai, whose untimely death took place on 11-5-1946. The several bright features recorded in this report were the result of his untiring efforts, mature experience and guidance. I acted as Health Officer from 11-12-1944 to 31-3-1945 during his absence on leave and from 1-5-1945 to 31-5-1945 when he acted as Commissioner.

The year under review is one which my predecessor could have been proud of. During the year the city fared better in public health than in 1944. Despite the difficulties which the citizens had to endure, more children were born and fewer persons died than in 1944, resulting in a natural increase in the population which had not been recorded in either of the two preceding years.

There were 30,549 births in 1945 as compared with 26,056 births in 1944 and the birth-rate in 1945 increased to 36.63 from 31.74 in 1944. While 29,705 persons died in 1944 only 27,277 persons died in the year under report with the result the death-rate decreased from 36.19 in 1944 to 32.71 in 1945. The number of deaths of children under one year of age was 6,532, i.e. 875 deaths less than in the previous year. The infantile mortality rate consequently fell from 284.27 in 1944 to 213.82 in 1945, while the rate for the quinquennium (1940-44) was 228.59. Whereas 178 mothers died of child-birth in 1944 only 155 mothers died of it in 1945. The maternal mortality rate in 1945 was 5.07 for 1,000 live-births against a rate of 6.83 for 1,000 live-births in 1944.

The outbreak of cholera which started in the first quarter of the year under report was effectively brought under control and the city became practically free from it in the subsequent quarters of the year.

P. SADASIVAN, L.M. & S., B.S.Sc.

Health Officer

Despite the continuance of the difficult conditions brought about by the war particularly with regard to overcrowding, scarcity of food-stuffs and high prices, the health of the city showed further improvement during the year under review. The death rate which was 36·19 per mille in 1944 decreased to 32·71 per mille during the year while the infantile mortality rate per thousand live births fell from 284·27 to 213·82 and of the maternal

mortality from 6.83 to 5.07. It is also gratifying to note that the birth rate increased from 31.74 to 36.63 per mille. The city's health could be further improved if over-crowding is relieved by the construction of more houses. The Corporation is quite alive to this most important problem which has a direct bearing on the health of the city. Certain schemes have actually been drafted and are awaiting the grant of financial assistance by the Provincial and Central Governments but the Corporation alone cannot tackle this big and costly problem. The milk supply scheme which was introduced in May '45 has contributed a great deal towards the improvement of the health of priority consumers, viz., expectant and nursing mothers and children. The supply of free midday meals to about 10,000 poor children studying in the Corporation schools continued during the year and helped to eradicate under-nourishment which was previously markedly noticeable It is unfortunate that Government in G.O. No. Ms. 607 among them. (Food Department) dated 31-7-46 decided to disband the scheme of free milk supply with effect from 1-1-47. I have requested the Government to reconsider the decision in the interest of poor mothers and children who are greatly in need of this valuable article of food, the supply of which has been directly responsible for the marked fall in the infantile and maternal mortality rates.

With a view to provide more facilities for skilled attendance during labour 3 new Child Welfare Centres and 3 new Maternity Wards were opened during the year 1945-46 and consequently more mothers received Corporation C. W. Centres. The Venereal Clinic assistance at the has done particularly good work and as many as 3,146 new cases were treated there of which 989 were women and 105 were children. The Tuberculosis Clinic opened last year has also justified its existence. As strikes by conservancy labourers have become rather frequent all over the country and as the health of the great cities will be endangered by repeated and continued strikes it is essential that this city should be completely sewered at the earliest opportunity, and necessary steps are being taken to compel every house owner to provide his house with a F.O.L. Over 18,000 feet of sewers were newly laid and 1,386 houses were given F.O.Ls for the first time in the year under report.

The Health Officer and his staff and the Lady Superintendent, C.W.S. and her staff have done good work during the year.

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J. P. L. SHENOY

Commissioner

#### Summary of Vital Statistics for 1945

Area of the city of Madras	• • •	29.396 sq. miles or
		18,813.44 acres
Population according to 1941 Census	•••	7,77,481
Population estimated for 1945 (mid-year)		8,33,923
Average density	•••	44 per acre
Births (live) registered	•••	30,549
Birth-rate		36.63 per 1,000 esti-
		mated population
Still births registered	* * *	1,107
Deaths registered	•••	27,277
Death-rate	• • •	32.71 per 1,000 esti-
		mated population
Natural increase	• • •	3,272
Infantile deaths registered	•••	6,532
Infantile death-rate	• • •	213.82 per 1,000 live
		births
Maternal deaths registered	•••	155
Maternal mortality rate	•••	5.07 per 1,000 live
		births

#### Deaths from principal causes

Diseases	No. of deaths	Rate per 1,000 estimated population
Cholera	19	0.07
Diarrhoea and dysentery	3,003	3.60
Small-pox	192	0.23
Malaria	46	0.06
Enteric fever	95	0.11
Tuberculosis	410	0.49
Respiratory diseases	6,009	7:21

#### Public Health of the City of Madras in 1945

The salient features of the state of public health in the city of Madras during 1945 as revealed by the statistical records of births and deaths may be summarised as follows:—

- 1. Increase in the birth-rate from 31.74 in 1944 to 36.63 per 1,000 of the estimated population in 1945.
- 2. Decrease in the death-rate from 36·19 in 1944 to 32·71 per 1,000 of the estimated population in 1945.
- 3. Decrease in the infantile mortality rate from 284.27 in 1944 to 213.82 per 1,000 live-births in 1945.

Area and population:— The area of the city is 29.396 sq. miles and the population according to the census of 1941 was 7,77,481. The estimated population for the mid-year 1945 worked out on the basis of arithmetical

progression and furnished by the Public Health Commissioner for India was 8,33,923.

Births and birth-rate:— The total number of births registered during the year was 30,549 i.e. 4,493 births more than in the preceding year and 2,108 births more than the average for the previous five years, 1940-44.

Calculated on the estimated mid-year population the birth-rate was 36.63 per mille against 31.74 in 1944, the average rate for the previous five years (1940-44) being 35.87.

Of the total births, 15,622 were males and 14,927 females i.e. 105 male births to every 100 female births as against 106:100 in the preceding year. Excess of male births over female births was recorded in 29 municipal divisions.

The seasonal distribution of births during the year was as follows:

			Births	Percentage of quarterly births to total births
¹1st quarter	• • •	$\left\{egin{array}{l}  ext{January} \  ext{February} \  ext{March} \end{array} ight.$	$ \begin{array}{c} 1783 \\ 1580 \\ 2191 \end{array} \right\} 5,554 $	18.18
2nd quarter	•••	{April May June	2054 $2120 + 7,025$ $2851$	23.00
3rd quarter	•••	{ July { August { September }	2458 2918 2671 3161	26.34
4th quarter	• • •	$egin{cases}  ext{October} \  ext{November} \  ext{December} \end{cases}$	$ \begin{vmatrix} 3161 \\ 2797 \\ 3965 \end{vmatrix} $ $ 9,923$	32.48
		To	tal 30,549	100.00

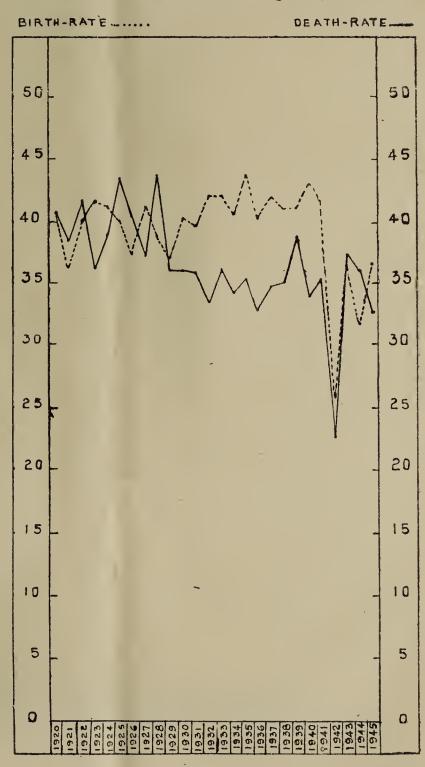
A comparative statement of births registered in each quarter of 1945 and 1944 with the quarterly averages for the quinquennium (1940-44) is furnished below:—

illisited below.	1 <b>s</b> t	2nd	3rd	4th
	quarter	quarter	quarter	quarter
1940–44 (average)	5,860	6,683	7,676	8,223
1944	5,789	6,759	6,345	7,163
1945	5,554	7,025	8,047	9,923

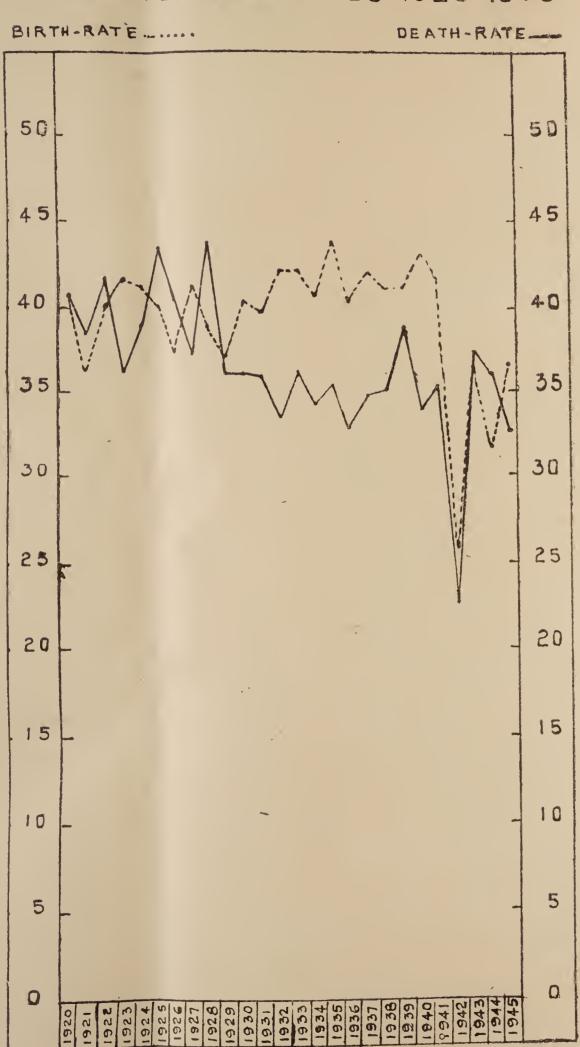
The number of births with birth-rates in the chief communities is as follows:—

Community		No. of births registered	Rate per 1,000 Census population in each community
European	•••	49	17.48
Anglo-Indian	• • •	454	47.24
Indian Christian	•••	1,811	39.58
Muslim	• • •	3,419	35.73
Hindu	* • •	24,812	39.95
Others	• • •	4	1.56
All communities	•••	30,549	39:29

CITY OF MADRAS - BIRTH AND DEATH-RATES 1920-1945

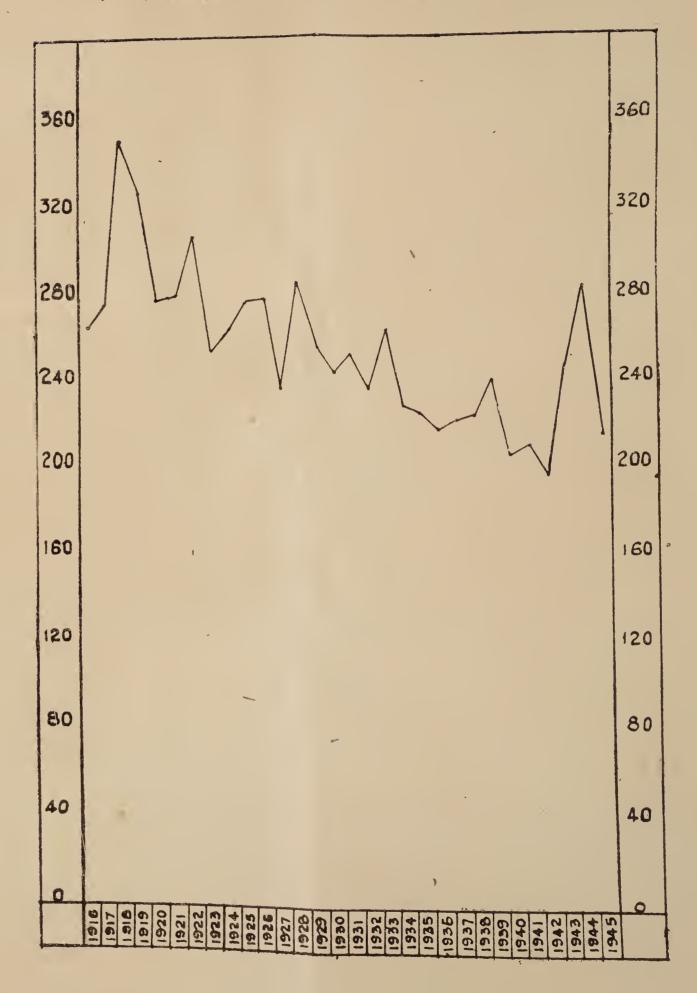


CITY OF MADRAS - BIRTH AND DEATH-RATES 1920-1945



CITY OF MADRAS.

INFANTILE MORTALITY RATES 1916-1945



Still-births:— The number of still-births was 1,107 against 1,062 in the preceding year.

Deaths and death-rate:— The total number of deaths from all causes registered during 1945 was 27,277 i.e. 2,428 deaths less than in the preceding year and 892 more than the average number of deaths for the previous five years, 1940 to 1944.

Calculated on the estimated mid-year population the death-rate was 32.71 per mille as compared with 36.19 in 1944, the quinquennial average being 33.17.

The causes for the high death-rate in the city are (1) the low standard of living resulting from extremely poor economic conditions, (2) overcrowding and congestion in dwelling houses, (3) high cost and scarcity of essential foodstuffs due to the effects of war, (4) the inclusion of deaths of non-residents in the city's vital statistics—during the year under report 2,464 non-residents died in hospitals, nursing homes, clinics, etc. in the city and (5) constant flow of poor homeless people into the city to eke out their livelihood.

If the system of transference of deaths is adopted the city can have the benefit of excluding a large number of deaths of non-residents from its vital statistics and the state of public health of the city can be assessed correctly.

An excess of 3,272 births over deaths was recorded during the year under report thus contributing to the natural increase in the population. The rate of natural increase was 3.92 per mille of the estimated population. The preceding year recorded an excess of 3,649 deaths over births.

During the year under report 32 municipal divisions recorded excess of births over deaths.

The distribution of deaths during the different quarters of the year was as follows:—

	No. of deaths	Percentage of quarterly deaths to total deaths
January (February	2,902	00.00
$1 \mathrm{st} \ \mathrm{quarter} \ egin{cases} \mathrm{January} \ \mathrm{February} \ \mathrm{March} \end{cases}$	$\left. \begin{array}{c} 2,902 \\ 2,647 \\ 2,546 \end{array} \right\} 8,095$	29.68
$2$ nd quarter $\left\{\begin{array}{l} A pril \\ May \end{array}\right\}$	2,332 \ 2,217 \}-6,602	0.4.00
11700	2,217 \6,602	24.20
July	1,939 ) 1,892 } 5,814	
$\mathbf{J}$ uly $\mathbf{J}$ uly $\mathbf{J}$ uly $\mathbf{J}$ uly $\mathbf{J}$ $$	1,892 \5,814 1.983 \	21.31
Coctober	2,171	
4th quarter{ October November December	2,071 \ 6,766 2,524 \ \	24.81
(December	Δ,0 (4± ) ————————————————————————————————————	
To	otal 27,277	100.00
	-	distribution of the second

The statement overleaf furnishes the number of deaths in the different quarters of 1945 and 1944 compared with the quarterly averages for the quinquennium, 1940-45.

	1st quarter	2nd quarter	3rd quarter	4th quarter
1940-44 (average)	6,793	5,818	6,157	7,615
1944	8,475	7,307	6,588	7,335
1945	8,095	6,602	5,814	6,76 <b>6</b>

Death-rates in communities:— The principal communities recorded the following death-rates during the year.

Community	Deaths	Rate per 1000 census population in each community
European Anglo-Indian Indian Christian Muslim Hindu Others	27 219 1,242 3,210 22,573 6	9.63 22.79 27.14 33.54 36.35 0.23
All communities	27,277	35.08

Hindu community recorded the highest death-rate.

Age and sex distribution of deaths:— Of the total deaths (27,277) registered during the year, 14,502 were among males and 12,775 among females. As usual male deaths predominated over female deaths. There were 114 male deaths for every 100 female deaths against 110: 100 in 1944. Excess of male deaths was recorded in 33 municipal divisions.

The specific death-rates among males and females were 30.68 and 34.53 respectively per mille of the census population.

The statement furnished below gives the number of deaths and the percentage of deaths to the total mortality in the various age-groups.

Age-group		No. of deaths	Percentage to total deaths
Under 1 year		6,532	23.95
1 to 5 years	•••	4,522	16.58
5 to 10 years	• • •	1,149	4.21
10 to 15 years	• • •	579	2.12
15 to 20 years	•••	<b>7</b> 23	2.66
20 to 30 years	• • •	2,311	8.47
30 to 40 years	• • •	2,134	7.82
40 to 50 years	• • •	2,152	7.89
50 to 60 years	• • •	2,178	7.98
60 years and above	• • •	4,997	18:32
All ages		27,277	100.00
4			****

The above statement shows that 40.53% of the total deaths occurred among infants, toddlers and pre-school children and that 18.32% deaths occurred among persons over 60 years of age.

Infantile mortality:— There were 6,532 deaths of children under one year of age during the year i.e. 875 deaths less than in the preceding year with an infantile mortality rate of 213.82 per mille as compared with 284.27 in the previous year, the quinquennial average being 228.59. The infantile deaths accounted for 23.95% of the total mortality in all the age-groups.

Age and causes of infantile deaths:— The statement furnished below gives the principal causes of infant deaths under different age-groups.

						,					
Age-groups	Small pox.	Measles.	Malaria.	Other Fevers.	Diarrohea and Dysentery.	Premature Birth.	Nervous System.	Respira- tory Diseases.	All other Causes.	Total Deaths.	
Under 7 days	•••	•••	•••	18	12	1,148	32	45	185	1,440	22.05
7 days and under one month	•••	•••	•••	23	32	628	75	101	135	994	15.21
One month and under 6 months	10	•••	1	183	278	285	231	954	516	2,458	37.63
and under one year	14	1	4	195	269	41	101	741	274	1,640	25.11
Total	24	1	5	419	591	2,102	439	1,841	1,110	6,532	

37.26% of infant deaths occurred within one month of life.

The number of births, number of infant deaths and infantile mortality rates are furnished in the statement at the end of the report. The infant death-rate was high (397.1) in the month of January and low (169.0) in the month of August.

It is gratifying to note that the infant mortality rate of 213.82 recorded during the year is the lowest figure compared with the decennial averages of 299.5 for 1910 to 1919, 272.6 for 1920 to 1929 and 234.6 for 1930 to 1939.

Infantile mortality rates in principal communities:— Infantile mortality rates in principal communities in 1945 were as follows:—

Community	No. of births registered	No. of infant deaths	Rate per 1,000 live-births registered in each community
European	49	1	20.41
Anglo-Indian	454	33	72.70
Indian Christian	1,811	286	157.92
Muslim	3,419	841	245.98
Hindu	24,812	5,371	216.47
Others	, 4	•••	•••
All communities	30,549	6,532	213.82

Muslim community recorded the highest infantile mortality rate.
H—2

Frincipal causes of deaths:— A comprehensive table showing the principal causes of deaths in 1944 and 1945 with the averages for the 5 years (1940-44) is furnished below.

		(		Increase or
A	Average No. of	No. of	No. of	decrease in
Causes of deaths	deaths during	deaths	deaths	1945 as
	the previous 5	in 1944	in 1945	compared with
	years 1940-44			1944
Cholera	137	53*	30*	<del></del> 23
Diarrhoea and dysentery	3,292	3,498	3,003	495
Small-pox	43*	144	233*	+89
Measles	2	1	2	+1
Malaria	98	82	46	<b>—</b> 36
Eneteric fever	/ 139*	86*	126*	+40
Other fevers	2,119	2,687	2,963	+276
Tuberculosis	525	290	410	+120
General respiratory disea	ses 6,331	7,166	6,009	-1,157
Deaths from child birth	231	178	155	<b>—23</b>
All other causes includin	g ·			
deaths from injuries	13,473	15,520	14,300	-1,220
	24 200	00 80	ON ONN	2.420
All causes	26,390	29,705	27,277	-2,428

(\* Includes deaths among cases admitted from Chingleput district)

The general mortality showed a distant reduction by 2,428 deaths from that of the preceding year. There was an appreciable decrease under cholera, diarrhoea and dysentery, malaria, respiratory diseases and under all other causes. The details of the number of deaths from cholera, small-pox and enteric fever among the indigenous cases and among the mofussil cases admitted into the hospitals in the city are given under the respective heads of causes of deaths.

The mortality figures for the year 1945 compare also favourably with the average figures for the past five years (1940-44).

The various causes of deaths are discussed in detail below.

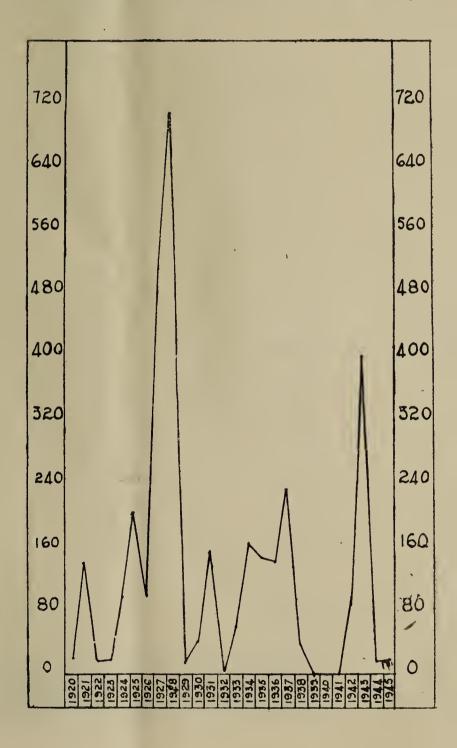
Cholera:— 59 attacks and 19 deaths including 12 attacks 3 deaths among imported cases were recorded against 48 attacks and 16 deaths in the preceding year. The annual death-rate was 0.07 per mille of the estimated population as compared with 0.02 in 1944, the average rate for the quinquenninm (1940–44) being 0.13.

20 municipal divisions returned cases. Of these, 12 divisions recorded no deaths. Only 8 divisions recorded mortality from cholera and in the 4th division alone 6 deaths occurred.

The disease was prevalent in the adjoining district of Chingleput from which 46 cases were admitted into the Infectious Diseases Hospital for treatment. Of these, 11 proved fatal.

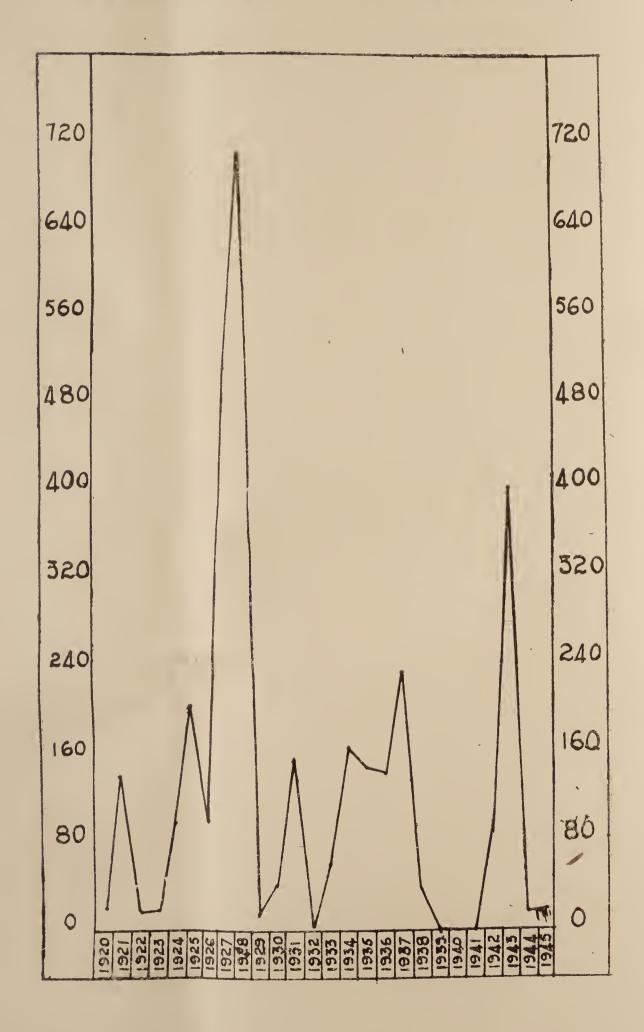
The number of attacks and deaths in the different quarters of the year

# CITY OF MADRAS DEATHS FROM CHOLERA 1920-45



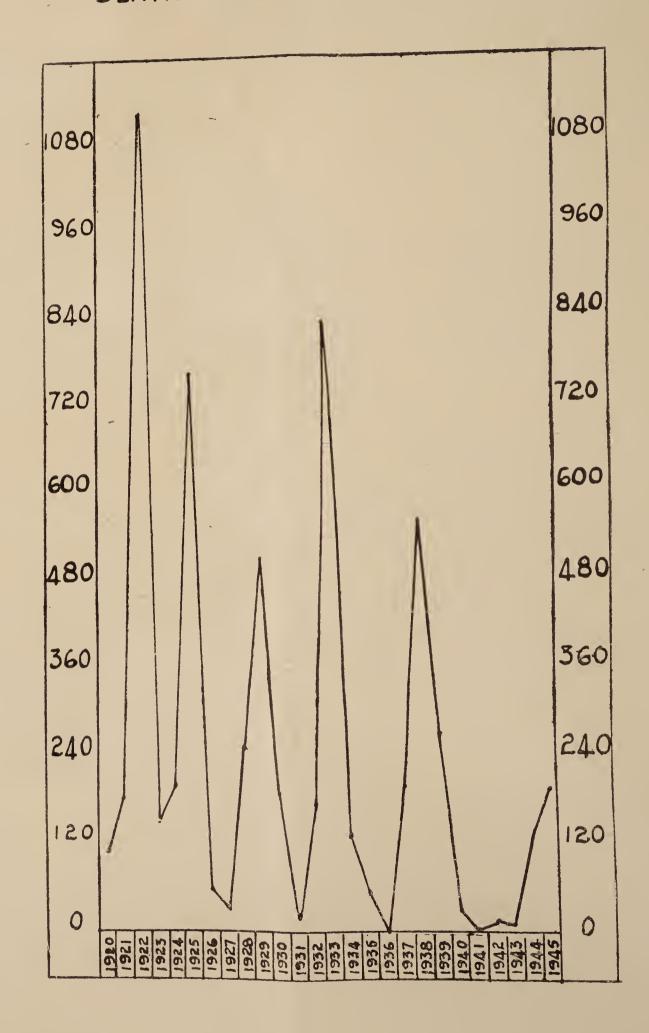
CITY OF MADRAS

DEATHS FROM CHOLERA 1920-45



CITY OF MADRAS

DEATHS FROM SMALL-POX 1920-45



is as follows:-

	Indigenous and imported cases			Cases admitted from Chingleput district	
1	Attacks	Deaths	Attacks	Deaths	
1st quarter	49	17	46	11	
2nd ,,	4	•••	•••	•••	
3rd ,,	3	•••	•••	•••	
4th ,,	3	2	•••	•••	
	_		1111 -		
	* 59	19	46	11	
			WY CONTRACTOR		

The mortality from cholera for a period of 10 years from 1936 is given below.

Year	Deaths
1936	140
1937	232
1938	$\frac{36}{2}$
1939 1940	2
1940	•••
1942	90
1943	400
1944	16
1945	19

Vigorous preventive measures were adopted. As many as 30,806 persons were inoculated against cholera. The admission of all the indigenous and imported cases of cholera into the Infectious Diseases Hospital helped a great deal in preventing the spread of infection.

Diarrhoea and dysentery:— 3,003 deaths from diarrhoea and dysentery were registered during the year i.e. 495 deaths less than in the preceding year and 289 less than the average for the past five years, 1940-44.

The death-rate was 3.60 as compared with 4.26 in 1944 and 4.14 the quinquennial (1940-44) average.

Small-pox:— During the year under report 1,049 attacks and 192 deaths were recorded against 545 attacks and 128 deaths in the preceding year. These figures include 605 attacks and 113 deaths among the residents, 349 attacks and 66 deaths among the imported cases and 95 attacks and 13 deaths among the homeless and destitutes. All cases excepting 7 were hospitalised in the Infectious Diseases Hospital.

The death-rate was 0.23 per mille as against 0.16 per mille in 1944, the quinquennial average being 0.05.

The infection was prevalent in the districts around the city. 226 cases were removed from Chingleput district and admitted into the Infectious Diseases Hospital in the city for isolation and treatment. Of these, 41 proved fatal. In the previous year 16 deaths occurred among the 68 cases admitted for treatment from Chingleput district.

The number of attacks and deaths in the different quarters of the year

was as follows:-

	Indigenous and imported cases		Cases admitted from Chingleput district		
	Attacks	Deaths	Attacks	Deaths	
1st quarter	312	64	80	14	
2nd "	318	73	81	14	
3rd "	276	41	35	10	
4th "	143	14	30	3	
	1.040	100	000		
11	1,049	193	226	41	

All the divisions recorded deaths from small-pox. 18 deaths took place in the 4th division.

Every infected house was disinfected and contacts were re-vaccinated. Special staff was appointed for preventive work and re-vaccination was pushed on in the infected localities and also in educational and public institutions.

Vaccination:— The Vaccination staff consisted of 17 Sub-assistant Surgeons designated as Medical Officers in charge of Vaccination and Registration. They were assisted by 62 Vaccinators and 8 Lady Vaccinators. Special staff was appointed for the prevention of the incidence of small-pox during the year.

The system of vaccination work by blocks into which every division has been divided continued during the year. Every Vaccinator and Sanitary Inspector was given a block and he maintained a register of unprotected persons in his block. Houses were regularly visited and the vaccinal condition of every inmate was recorded. Unprotected persons were immediately vaccinated.

Medical Officers in charge of dispensaries and Medical Inspectors of Corporation schools also performed vaccinations.

Operations:— 30,179 primary vaccinations and 3,71,150 re-vaccinations were performed during the year under report. There was an excess of 447 primary vaccinations and 77,477 re-vaccinations over the figures of the preceding year.

		1944	1945	Increase
Primary vaccination Re-vaccination	•••	29,732 2,93,673	30,179 3,71,150	447 77,477
		3,23,405	4,01,329	77,924

The vaccination statistics for the past 5 years (1940-44) are furnished below.

Year	Primary vaccination	Re-vaccination	Total
1940	33,292	1,58,986	1,92,278
1941	31,995	1,60,488	1, 2,483
1942	18,994	70,196	89,190
1943	27,285	99,698	1,26,983
1944	29,732	2,93,673	3,23,405
1945	30,179	3,71,150	4,01,329

Number of successful vaccinations:— 29,781 primary vaccinations and 9,630 re-vaccinations were successful during the year. The rate of success in the case of primary vaccinations was 99.65 against 99.7 in 1944. The rate of success in the case of re-vaccinations was 4.32 as compared with 5.2 in the preceding year.

The number of persons successfully re-vaccinated was 50.7 per mille of the census population against 49.14 in the preceding year.

Infantile vaccinations:— 19,443 infants under one year of age were vaccinated against 18,654 infants in 1944. Of these, 19,220 were successfully vaccinated as compared with 18,420 in the previous year.

Verification of births:— 35,062 births including out-births were verified for the purpose of vaccination during 1945. Of these, 3,827 infants died without being vaccinated, 7,639 infants left the city before they attained the age of one year and without being vaccinated. 19,225 infants under one year of age were successfully vaccinated. The vaccination of 500 children was postponed on medical grounds.

Inspection of vaccinated persons:— Out of 30,179 primary vaccinations and 3,71,150 re-vaccinations performed during the year. 20,463 primary vaccinations and 86,950 re-vaccinations were verified by the Assistant Health Officers and Medical Officers in charge of Registration and Vaccination.

Prosecutions:— 968 prosecutions were launched during the year for failure to comply with the vaccination by-laws of which 681 ended in conviction.

Measles:— 2 deaths were registered with a death-rate of 0.002 per mille against one death with a death-rate of 0.001 in 1944, the quinquennial average rate being 0.002.

Malaria:— 46 deaths were registered from malaria as against 82 deaths in 1944, the average number of deaths during the past 5 years, 1940-44, being 98. The death-rate was 0.06 per mille against 0.10 in 1944 and 0.12 which is the average rate for the quinquennium, 1940-44.

Enteric fever:— 424 attacks and 95 deaths occurred among the residents of the city including those persons who came into the city from outside with the infection as against 503 attacks and 66 deaths in 1944. The death-rate was 0.11 as against 0.08 in 1944, 0.15 being the average for the quinquennium, 1940-44.

102 cases were admitted into the various hospitals and institutions in the city from the adjoining districts for treatment and 31 of them proved fatal as against 111 attacks and 20 deaths in the previous year.

Prompt action was taken to adopt preventive measures in every case that was notified. 10,690 persons were inoculated with T.A.B. vaccine.

Other fevers:— During the year 1945, 2,963 deaths were registered from other fevers as against 2,687 in the previous year. The death-rate was 3.55 as against 3.27 in 1944, 2.66 being the quinquennial (1940-44) average.

Tuberculosis:— 410 deaths were recorded from tuberculosis during the the year as compared with 290 deaths in 1944 and 525 being the average

for the past 5 years, 1940-44. The death-rate was 0.49 in 1945, 0.35 in 1944 and 0.67 during the quinquennium, 1940-44.

The Corporation Tuberculosis Clinic at Pulianthope and the Government Tuberculosis Institute at Egmore notified all cases that came to these institutions for treatment. Occurrence of cases was reported to the divisional Sanitary Inspectors who were instructed to keep a close watch on the patients and their relatives and to advise them on the need to check the infection.

The report on the working of the Corporation Tuberculosis Clinic at Pulianthope is furnished separately.

General respiratory diseases:—6,009 deaths were registered during the year — 1,157 deaths less than in the preceding year and 322 less than the average for the previous 5 years, 1940-44. The death-rate was 7.21 as compared with 8.73 in 1944 and 7.96 being the average rate for 1940-44.

Deaths from child birth:—155 mothers died after child birth as against 178 in 1944. The maternal mortality rate was 5.07 per 1,000 live-births i.e. 1.76 less than the rate (6.83) for the preceding year and 2.98 less than the quinquennial (1940-44) average.

The statistics relating to the deaths of mothers who came under the care of the various clinics of the Corporation Child Welfare Scheme are given in a separate report by the Superintendent, Child Welfare Scheme.

Deaths from injuries:— 313 deaths were recorded from injuries with a death-rate of 0.39 per mille against 202 deaths in 1944.

Deaths from other causes:—13,987 deaths i.e. 1,331 less than in the preceding year were registered under this group of causes. The death-rate was 16.77 per mille against 18.66 in 1944 and 16.64 which is the average rate for the past 5 years, 1940-44.

Certified deaths:— 4,055 deaths were certified by the various hospitals and institutions in the city and 637 deaths by private medical practitioners as to the causes of deaths. The certified deaths represented 17% of the total deaths compared with 21% in 1944. Medical Officers in charge of Registration of Births and Deaths verified the causes of other deaths.

MEDICAL RELIEF:— During the year under report free medical aid was given in the following institutions:—

20 Allopathic Dispensaries

4 Unani Dispensaries

3 Siddha Dispensaries

1 Ayurvedic Dispensary

3 Skin and Leprosy Clinics

1 Venereal Clinic

1 Tuberculosis Clinic

In the 28 out-patient dispensaries cases of minor ailments were attended to. A total of 20,15,397 cases, of which 9,44,034 were new cases, were treated in them. The total number of minor operations performed was 6.399 and the total number of cases treated for skin affections was 1,53,293. In the Ayurvedic dispensary for women and children 34,783 cases were treated. In the Siddha dispensary opened in Royapuram on 5-10-1944 the total number of cases attended to was 62,820 of which 51,358 cases were treated during the year under report.

The Skin and Leprosy Clinic, Ice House Road, recorded a total attendance of 49,451 cases of which 15,417 were new cases of skin and other diseases and 250 were new cases of leprosy. The treatment of cases other

than those of skin diseases and leprosy was discontinued from 1-4-1945. 639 injections for skin cases and 4,816 injections for leprosy were given. Among the new skin cases there were 2,566 new cases of scabies. A further decrease in the incidence of scabies was noticeable during the year under report.

In the Skin and Leprosy Clinic attached to the dispensary at Vyasarpady the total number of cases treated was 8,208 of which 2,512 were new skin cases and 114 new cases of leprosy. The number of injections given to lepers was 3,569.

In the Skin and Leprosy Clinic attached to the dispensary in Teynampet cases treated totalled 2,364. 2,358 of these were new cases of skin diseases. The treatment of cases of leprosy had the following results:—

		Ice House Road Clinic	Vyasarpady Clinic
No. of new leprosy cases No. improved	•••	250 140	114 76
No. symptom free No. arrested		18 12	$\frac{3}{4}$
No. otherwise	• • •	80	31

The Venereal Clinic in Pulianthope had a total attendance of 24,261 cases of which 3,146 were new cases. Among the new cases there were 2,052 males, 989 females and 105 children. 507 males, 342 females and 36 children had syphilis; 399 males, 338 females and 11 children had gonor-rhoea; 20 males and 14 females had other venereal diseases; 1,126 males, 294 females and 59 children had genital lesions of non-venereal origin. During the year under report 4,959 injections were given and 1,611 specimens of blood were sent to the King Institute, Guindy, for Wasserman and Kahn tests. The number of operations performed was 150.

Among the 885 cases of syphilis there were 15 neuro-syphilitic cases. 10 lumbar punctures were done in their treatment.

748 cases were treated for gonorrhoea. The diagnosis of every case of gonorrhoea was confirmed by microscopical examination of the urethral, cervical and vaginal smears. Almost all cases responded well to the treatment with the sulphanamide group of drugs. In a few cases where the symptoms were persistent gonococcal vaccines were given with good results.

34 cases of chancroid, lympho granuloma, inguinal granuloma and infective granuloma were treated with sulphonilamide therapy and the results were satisfactery.

A Lady Health Visitor was appointed on 15-11-1945. She visited 74 patients who had stayed away before complete cure and she succeeded in inducing 47 of them to continue the treatment. On her advice women brought their husbands for examination at the clinic. The clinic was thereby enabled to treat both husband and wife wherever necessary.

In the Tuberculosis Clinic, Pulianthope, there was a total attendance of 20,080 cases of which 4,219 were new cases. 2,402 sputum examinations, 3,154 screening examinations and 732 contact examinations were done and and 515 X-Ray pictures taken. 479 cases of the sputum examinations proved positive.

The number of cases of pulmonary tuberculosis was 501 of which 316 were males, 170 were females and 15 were children. In the age-group of 15

to 25 years there were 134 cases and in the age-group of 15 to 60 years there were 352 cases. 147 of the cases came from Pulianthope, 77 cases from Chulai, 51 cases from Purasawalkam and 35 cases from Otteri.

Most of these cases were bilateral and required isolation and symptomatic treatment. 117 cases were sent to the Tambaram Sanatorium where only 50 beds are set apart for patients sent from this clinic. 313 A. P. injections (Initial and Refills) were given during the year. The Health Visitor paid 1,953 visits to the houses of the patients. She verified and notified 160 deaths among the diagnosed cases of pulmonary tuberculosis.

The clinic was provided with facilities for Artificial Pneumothorax treatment and Ultra-Violet Ray treatment.

The Infectious Diseases Hospital, Tondiarpet, treated all cases of infectious diseases occurring in the city and those sent from the adjoining district of Chingleput. There were 3,161 admissions during the year under report. Among those admissions, 1,268 cases were for small-pox, 787 cases for chicken-pox, 141 cases for measles and 105 cases for cholera. There were 12 cases of cerebro-spinal fever and 12 cases of diphtheria.

Of the total of 3,217 cases treated 2,688 were cured and discharged, while 397 died. The percentage of mortality was 12.34 for all diseases.

During the year under report the following improvements were effected in the Infectious Diseases Hospital.

- 1. Construction of telephone room, dispensary and medical stores room.
- 2. Construction of a dhobykhana.
- 3. Construction of a gateman's bunk.
- 4. Renovation of 'G' ward.
- 5. Extensions to the mortuary.
- 6. Relaying of roads and pathways.

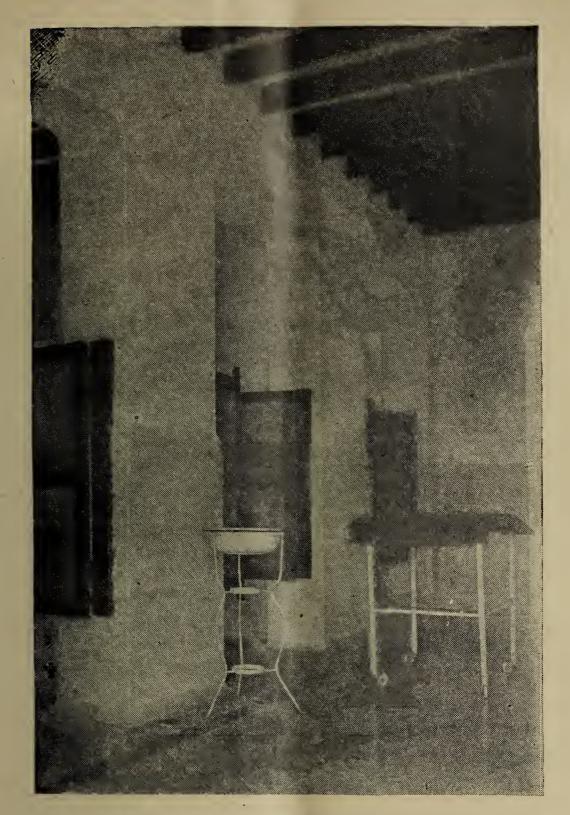
#### MEDICAL INSPECTION OF CORPORATION SCHOOLS, 1945-46.

Staff:— Four Medical Inspectors and two Medical Inspectresses worked till 18-12-1945. The staff was subsequently increased to seven Medical Inspectors and three Medical Inspectresses by the addition of four Medical Officers (Registration and Vaccination). to the Medical Inspection staff and re-adjustment of the work of registration and vaccination.

work underwent a change. The Medical Inspectors themselves treated the defective children in the afternoons instead of sending them to the Corporation dispensaries. Necessary drugs were obtained from the dispensaries for this purpose. Shark liver oil and calcium lactate were purchased in bulk and were administered to ill-nourished children. In two schools yeast was given to the ill-nourished or otherwise defective children. Milk was also given to the deserving children in all the schools.

There were 155 Corporation schools. The Medical Inspectors visited all of them during the year in connection with the scheme to treat cases of mal-nutrition and vitamin difficiency among the school children. 24,350 boys and 11,985 girls were examined at these special inspections.

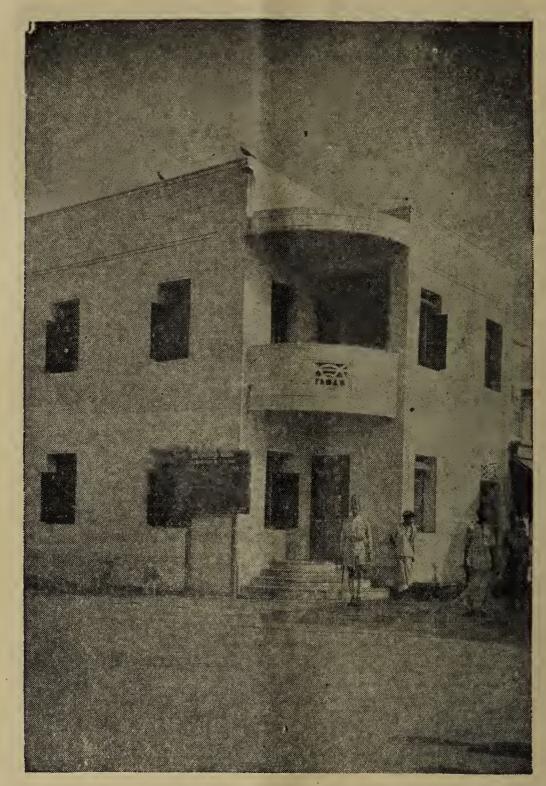
The Medical Inspection staff conducted routine medical inspection work in 104 schools. The number on rolls in these schools was 16,714 boys and 14,420 girls and the average attendance in them was 13,351 boys and



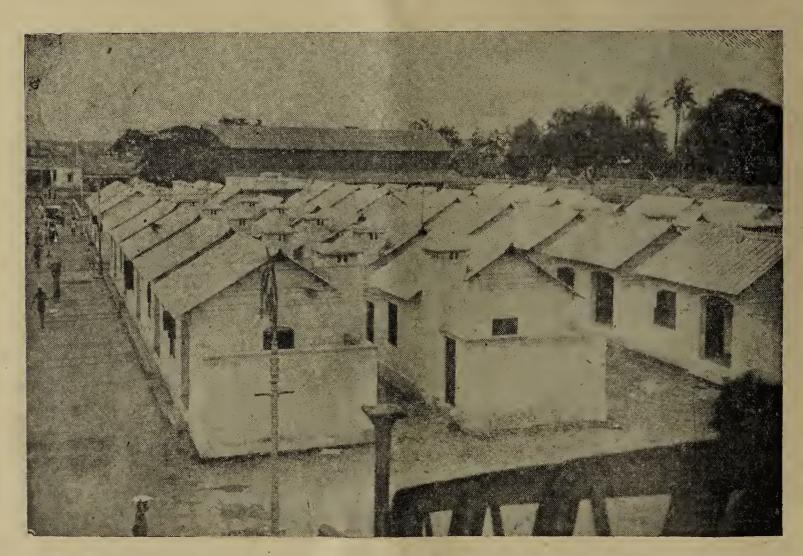
Newly constructed Examination Room
Infectious Diseases Hospital, Tondiarpet



Newly constructed dispensary block Infectious Diseases Hospital, Tondiarpet



Corporation Divisional Office Acharappan Street, 10th Division



Newly constructed Tenements, Cemetery Road

11,541 girls. 14,322 boys and 11,821 girls were examined at these inspections. 6,489 boys (45.297 per cent) and 4,818 girls (40.76 per cent) were defective requiring medical attention. They were treated by the Medical Inspection staff.

Personal hygiene:—875 boys (6·11 per cent) and 165 girls (1·40 per cent) were dirty in their person and clothing. They were made to bathe in the schools. Some of them had skin affections and they were treated after the baths.

Malnutrition and catarrhal conditions:— 3,069 boys (21.43 per cent and 696 girls (5.89 per cent) were under-nourished as against 24.51 per cent and 8.03 per cent respectively in the previous year. 2,265 boys (15.81 per cent) and 1,038 girls (8.78 per cent) had dental and oral complaints. 1,998 children had stomatitis and they were treated at the schools with benefit. 108 had their carious teeth extracted. 1,428 children had enlarged tonsils and 38 among them had their offending tonsils removed by operation. Two children had their defects of vision corrected by wearing glasses. 215 children received treatment for discharge from the ears. 5 children were defective of hearing and they were provided with seats close to teachers. 5 children were having defects of speech.

Special measures were adopted to treat mal-nutrition, vitamin deficiency and other allied manifestations among the school children. Shark liver oil and calcium lactate were distributed to all the schools. The Medical Inspectors selected 3,685 ill-nourished and otherwise defective children for treatment. Another group of 3,404 children were selected to serve as control. Children of both these groups were weighed periodically. A general improvement was noticed in the children receiving the vitamins at the end of three months. There was an average increase of 1.38 lbs in their weight as against the average increase of 0.98 lbs. in the weight of children who did not receive them.

In two schools 120 ill-nourished children were given yeast. Most of them were suffering from stomatitis. When the final weighing was done 79 children were available. The results of analysis showed a slight improvement in the group of boys taking yeast, the average weight increasing from 56.4 lbs. on 11-2-1946 to 58.1 lbs on 24-6-1946. Girls who were given milk and yeast showed good results. The average weight rose from 43.5 lbs. on 13-2-1946 to 48.8 lbs. on 20-6-1946. Among boys and girls stomatitis disappeared in the yeast-fed children in a short time whereas in another group treated on other general lines the condition was found very resistent. The results in the case of yeast-fed children were striking in this respect. The ages of these children varied from 7 to 16 years, the majority of them being of the age of 10 and 11.

Circulatory and respiratory diseases:—105 boys (0.73%) and 70 girls (0.59%) had defects relating to heart and blood. 112 anaemic children were treated with benefit by the Medical Inspectors. 9 children had enlarged spleen due to malaria and they were suitably treated.

Diseases of bones and joints and nervous system:— 548 children had deformities of chest due to rickets in their childhood. 13 had infantile palsies and functional disorders of nerves. All of them were suitably treated.

Infectious and contagious diseases:—1,584 boys (11.06%) and 1,492 girls (12.62%) had infectious diseases, the corresponding figures for the previous year being 23.68% and 19.84% respectively.

1,937 children suffering from scabies were given daily baths and treatment in the schools. About 1,500 of these children were benefited,

412 children were having signs and symptoms of leprosy in its early stages. They received appropriate treatment at the allotted centres. In three children of tuberculoid type, there was improvement and they became almost symptom free.

General preventive work:—7,539 children were protected against small-pox by re-vaccination. 625 children were inoculated against cholera and 3,806 against typhoid.

Other diseases: 27 children were circumcised for phimosis.

Medical treatment:— Most of the defects among the school children related to mal-nutrition, vitamin deficiencies and infectious skin conditions and they were treated by the Medical Inspectors at the schools. Though treatment at the schools was commenced in February, 1946, as many as 4,842 children received attention at the schools, while the number treated at the dispensaries before the introduction of this scheme was 3,777.

Re-inspections:— 439 visits were paid to the schools for treatment of children and 8,719 re-examinations were conducted during these re-visits.

Co-operation of teachers and parents:— 3,987 parents of defective children were present during the examination of their children and they were given advice regarding the treatment of their defects. The school staff followed up the treatment given to the defectives and frequently met the parents of some of them who remained indifferent. The school staff also attended to the administration of shark liver oil and other medicines and the defectives derived the benefit of regular attention and treatment. As in the previous years special attention was bestowed on the treatment of leper children.

School sanitation:—Change of premises was suggested for one school in view of the unsuitability of the building under occupation. In the case of 27 schools improvements to the buildings were suggested. 89 of the schools inspected had flushout type of latrines. 45 schools required playground accommodation. Proper water supply has been provided for all the schools. Strained tap-water was given to the children for drinking purposes. 50 schools had bathing facilities.

Midday meals:—In 132 schools, 7,468 children were provided with midday meals on school working days. From 1-4-1946, the scheme came under the control of the Health Officer. Milk was distributed from this date to about 14,000 children in the schools on all the days in the week.

Propaganda:— 139' lectures and 238 talks on health subjects were arranged in the schools. The total attendance at these lectures and talks was about 27,000.

SANITATION:— The city was divided into 4 ranges for administrative purposes. Each of the 4 Assistant Health Officers was placed in charge of a range. They looked after all the work relating to public health in the ranges under their charge.

An important feature during the year under report was the opening of Divisional Offices in the city with a view to decentralise the civic administration. In each of the 40 divisions in the city, a Divisional Office was opened with a staff consisting of a clerk and 2 peons. One of the outdoor officials in each division was designated as the Divisional Officer to issue instructions to the other outdoor officials of the division and thereby coordinate the activities of various departments.

The work in the Divisional Office comprises the following:—

(1) Registration of births and deaths

(2) Vaccination

- (3) Receiving payment of taxes on carts, cycles and vehicles and animals
- (4) Attending to enquiries about municipal matters and receiving complaints

(5) Distributing tapals in the division

The Divisional Office in Kilpauk (22nd division) was opened on 5-4-1945 by Sir T. Austin, K.C.I.E., I.C.S.

The Divisional Offices were very useful to the public who had petty defects and irregularities regarding conservancy, drainage, etc. rectified then and there by making complaints to Divisional Clerks or Officers.

Sewers:—The year under report witnessed the laying of 18,447 feet of sewers of which 7,702 feet were laid in Purasawalkam area, 2,880 feet in Adyar area, 2,175 feet in Kilpauk area, 815 feet in Chetpet area and 758 feet in Thyagarayanagar area. The Government sanctioned the plans and estimates for underground sewers and storm water drains in Perambur and Vyasar-pady areas. Storm water drainage works were in progress in Perambur area.

2,359 notices for the provision of flushout latrines in houses in sewered areas were issued and 1,657 private flushout latrines were installed. 539 of them were erected by private plumbers and the rest were constructed by the Special Works Department.

The construction of public conveniences at the following places was in progress at the end of the year.

- 1. Venkatesa Naicken Street, 2nd division.
- 2. Bishop Cheri, 4th division.
- 3. Asirvadapuram, 9th division.
- 4. Near Law's Bridge, West Cooum River Road, 25th division.
- 5. Park near the Church, West Cooum River Road, 26th division.
- 6. Kodambakkam High Road (at the site of the existing latrine), 29th division.
- 7. Junction of South Cooum River Road and Munia Pillai Street, 28th division.
- 8. Opposite T. B. Hospital, Spur Tank Road, 29th division.
- 9. Near Commander-in-chief Bridge, Binnys Road, 31st division.
- 10. Foreshore opposite to 1ce House, Marina, 33rd division.
- 11. West Cott Road, 34th division.
- 12. Foreshore opposite to I.G.'s Office, Marina, 35th division.
- 13. Batcha Garden near Nochi Kuppam.
- 14. Foreshore opposite to Rosary Church, Marina, 39th division.

Housing:—1,439 plans for the construction and reconstruction of buildings were received for scrutiny. 329 of these plans were rejected for sanitary reasons. In the case of 875 plans for houses in sewered areas, the provision of flushout latrines was insisted upon.

427 houses were newly constructed. 358 of these houses were provided with flushout latrines. The rest of the houses were situated in unsewered areas and had masonry latrine accommodation.

The scheme for the provision of tenements was proceeded with. 11 tenements were built in the Old Slaughter House Road (3rd division). 20 huts in Ayodhyakupam, South Beach Road, were also erected. 20 tenements in Old Slaughter House Road (19th division) and 50 tenements in Cemetery Road and 50 tenements near Kodambakkam High Road were under construction.

As the development of suburban areas and their inclusion in the city may solve the problem of housing and relieve congestion in the city, a detailed scheme for housing in Aminjikarai and some other contiguous areas was prepared and submitted to Government. A similar housing scheme in the Nungambakkam tank bund was under contemplation.

With a view to safeguarding the health of the city from infection from the surrounding villages by bringing them under more effective control Government were requested to consider the question of the extension of the city limits. As Government approved the suggestion, proposals in detail to include 20 sq. miles covering the Saidapet Municipality, Aminjikarai and Sembiam Panchayats and other contiguous areas within the city were prepared for their approval. These areas have been included within the city from 1–4–1946.

The question of improving the slums was also taken up. In Islambada the work of laying water mains was completed and the formation of road was in progress. In Sivarajapuram as well as Islambada laying of sewers and installation of electric lights were in progress.

19,503 houses were inspected by the Sanitary staff and the following defects were noticed in them:—

- (1) Want of proper drainage in 809 houses
- (2) Want of proper latrine accommodation in 1,770 houses
- (3) Defective water supply in 492 houses
- (4) Bad ventilation in 865 houses
- (5) Miscellaneous defects in 1,590 houses

4,444 notices were issued to rectify these defects and 581 prosecutions were launched for failure to comply with the terms of the notices served. As a result of the action thus taken 3,683 houses were repaired and improved. 1,568 houses were inspected by the Sanitary staff on receipt of complaints.

Offensive trades:—15,541 applications for licences to run offensive trades were received and dealt with. 14,682 applications were sanctioned and 834 applications were refused on sanitary grounds. In 379 cases prosecutions were launched for carrying on offensive trades without licences and in 166 cases similar proceedings were instituted for contravening the conditions of licences issued.

57 lodging houses were registered under the Public Health Act. Certificates were issued only to the lodging houses which were provided with all sanitary requirements.

There were 833 licensed cattleyards at the beginning of the year. 362 cattleyards were unfit for licence. 697 notices to effect sanitary improvements were issued and 254 prosecutions launched for failure to comply with the terms of the notices served. The closure of 103 insanitary cattleyards was effected as a result of action taken against their owners.

The municipal cattleyard at Basin Road was vacated and it was made a supply centre in the scheme for the free distribution of milk to priority consumers. It was repaired and improved for housing and milking cows and buffaloes and for boiling milk before sending it to the Child Welfare Centres for distribution.

The other cattleyards at Purasawalkam, Chintadripet and Triplicane were well maintained.

The municipal dhobykhanas at Robinson Park, Conransmith Nagar, Venkatathri Naick Street and Chetpet were maintained in a sanitary state. In the dhobykhana in Chetpet, roads were laid and an additional tap for drinking purposes was provided.

Food control:— With the division of the city into 4 ranges for administrative purposes, the control over the markets in the city was tightened. The Assistant Health Officers inspected the markets in their ranges more frequently to ensure their proper upkeep. Owners of private markets were served with notices to repair the flooring, drains and platforms in their markets and to carry out other improvements not involving major structural alterations and they readily complied with the terms of the notices. They were also required to keep the stalls numbered and the gangways free from encroachments. The owner of Olakadai Market in 6th division was prosecuted and he paid a fine of Rs. 15 for allowing vendors to occupy the gangways.

The private market in Chulai was re-opened and it was placed under the immediate supervision of a Superintendent. The New Washermanpet Market and the Jubilee Market were closed during the year under report.

In Fruit Market the construction of additional bunks was completed at an approximate cost of Rs. 5,000. In Moore Market the construction of separate rows of stalls for hawkers was completed. The construction of a vegetable gallery in the inner verandah to the north-west of the quadrangle at an estimated cost of Rs. 9,000, was taken up departmentally. Fly-proof covers were insisted upon for protecting articles of food from contamination by dust and flies.

Meat supply:— The sheep, cattle and pig slaughter houses functioned satisfactorily throughout the year. 4,12,750 sheep and goats, 28,295 cattle and 4,502 pigs were brought for slaughter. Among these animals, 4,046 sheep and goats, 1,023 cattle and 10 pigs were found unhealthy and were not allowed to be slaughtered. 23 carcases and 32,486 organs of slaughtered animals were found unfit for human consumption and were destroyed. The divisional sanitary staff periodically inspected the mutton stalls in the markets and other places to prevent the sale of unauthorised meat.

The construction of the sheep shandy was completed. The level of the compound was raised, lawns were laid and avenue trees were planted. The cattle slaughterhouse was improved.

Weights and measures:— All public and private markets, ration shops, bazaars, depots, godowns and stalls in the city were periodically visited and the weights, measures and scales in use there were examined and checked. Street hawkers were also intercepted and the weights, measures and scales used by them were scrutinised and tested. In all the markets and ration shops the merchants were found to use standard weights and scale duly stamped. Surprise checks were made to prevent under-measuring and under-weighing. In ration shops for kerosene oil the public were advised to stick

paper labels on the bottles to indicate the level of the oil in them whenever check-measurement was made.

During the year under report 480 measures, 416 weights and 272 scales found defective were seized and confiscated. A rice ration shop-keeper was convicted and fined.

Anti-rabic measures:— There were 4 persons licensed to catch stray dogs in the city. They accompanied the Superintendent of the Lethal Chamber in the dog van and caught 13,621 dogs of which 7,305 were bitches. 484 dogs were returned to owners who claimed them; 125 dogs were given to the 2 Medical Colleges in the city; 12,989 dogs were electrocuted at the Lethal Chamber.

The Lethal Chamber was extended. The dog van was remodelled providing separate enclosure for each dog caught.

Foor House:— There were 124 inmates at the beginning of the year. During the year 329 admissions were made, 44 inmates died of old age and 243 inmates were discharged.

The inmates were given special feeds on 12 festival days and on the birthday of H. H. Maharajah of Travancore, out of the interest accruing from endowments made for the purpose. The female inmates were accommodated in a separate ward in the male section. The provision of a separate enclosure for women was under consideration at the close of the year.

Special Home:— The institution for the infirm and crippled completed another year of its useful existence. There were 125 inmates on 1-4-1945. 354 inmates were admitted, 167 inmates who had served their period of detention were discharged, 89 inmates died and 6 inmates escaped. The strength of the Home on 31-3-1946 was 217. 354 inmates newly admitted were committed to varying periods of detention. 106 persons were committed for a period of 2 years, 189 persons for a period of one year and 59 persons for a period of 6 months. Among them 290 were males, 61 were females and 3 were children. The adults were all between the ages of 16 and 70; 2 children were 15 years old each; 1 child below 5 years of age was committed with the mother.

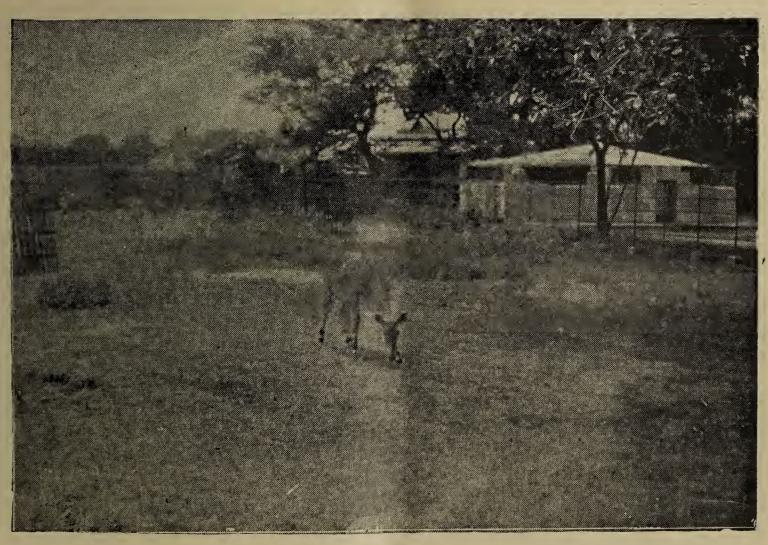
There were 130 lepers, 58 crippled and 14 blind among the inmates newly admitted in the year. The leprous inmates were treated with daily injection of Hydrocorpus oil, administration of Ol. Vitaminatum by mouth and injections. Their sores were daily cleaned and dressed. Other inmates suffering from other diseases were all treated with care and they showed improvement in their condition.

From out of a portion of the Commissioner's Poor Fund, a new ward to accommodate 100 inmates was completed during the year. 6 more flushout latrines and bath rooms in the male section and 3 more flushout latrines and bathrooms in the female section were constructed. An electric pump was installed. A new kitchen and a new dining hall were also constructed. Out of the sum of Rs. 17,000 donated by the Madras Race Club, the construction of a ward to accommodate 100 male inmates was taken up.

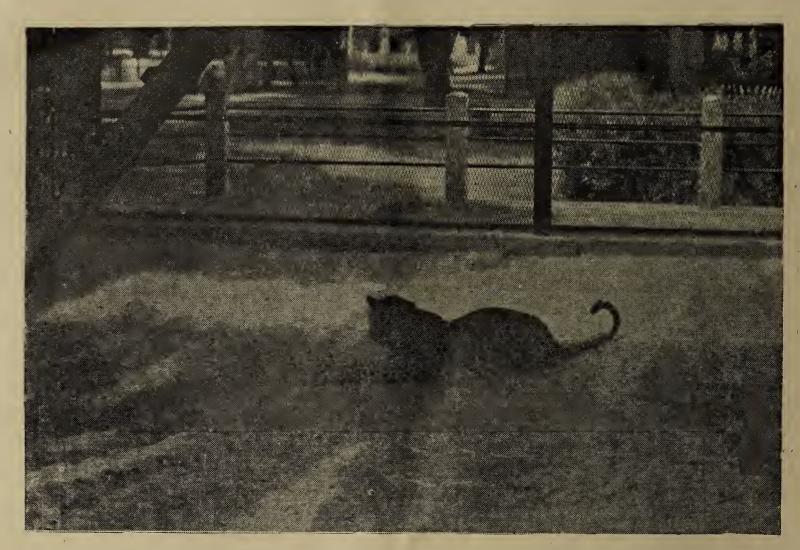
Industrial Home:— The construction of the work house for able bodied beggars which had been kept in abeyance on account of the war was taken up again by the council, which at its special meeting held on 6-2-1945, resolved to apply to the Government for a sum of Rs. 83,000.



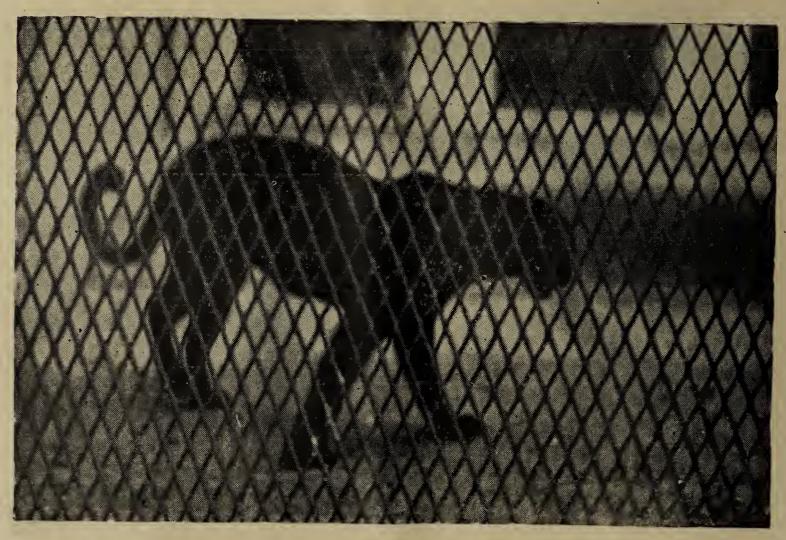
Model huts in Ayodhyakuppam



Female 'Nilgai' deer grazing in the open yard Zoological Garden



Male leopard browsing in the open enclosure, Zoological Garden



Black panther (female) — A rare specimen obtained by purchase

The loan was sanctioned by the Government in G.O. No. 1521 P.H. dated 9-6-1945 and the work was taken up for execution.

As required by Section 71 of the Madras City Police Act, the Government were requested to have the rules for the management of the work house notified.

Zoological Garden:— During the year under report 12 animals were acquired by purchase and 13 animals were received as gifts. 10 more animals were obtained by capture. There were 88 births and hatchings among the animals in the Zoo. The birth of a zebra colt and the hatching of 3 emu chicks were special features of interest.

A clouded leopard was obtained in exchange for a pair of white peafowls, but unfortunately it did not survive long. As it was very young it died of enteritis before it could get acclimatised.

The right of collecting the fees at the Zoo entrance and cycle stand was leased out for a sum of Rs. 15,000 for the year 1945-46. The income derived from hiring the elephants was Rs. 780 and the proceeds from the sale of animals amounted to Rs. 162 for the year 1945-46.

The following improvements were effected during the year:-

- (1) Construction of a separate enclosure for the zebras
- (2) Breeding of larvivorous fish in the Zoo lake

The work of constructing sheds for the 3 elephants was let on contract.

Boating:— The construction of the new boat-house was completed. There were 1 rowing boat and 2 poling punts for plying round the Zoo lake. Adults were charged a fee of one anna per head and children a fee of half anna per head for a round. Self rowing was permitted on payment of a fee of 8 annas for half-an-hour. These fees were collected departmentally and the income therefrom was Rs. 2,512-8-0 for the year 1945-46.

Swimming Bath.— There was a steady flow of bathers to the Royal Swimming Bath. The total number of bathers during the year was 23,719. Owing to the decrease in the military personnel stationed in the city and its suburbs there was a fall in the number of bathers frequenting it. The income from the sale of daily tickets and season tickets was Rs. 6,415-2-0.

Propaganda:— The inculcation of civic ideas by propaganda was continued. There were 1,497 talks and 2,504 lectures. 95 lectures were accompanied by demonstrations with lantern slides.

CONSERVANCY:— The total expenditure on conservancy for the year 1945-46 was Rs. 17,62,117-4-8 against Rs. 15,96,311-7-7 for 1944-45. There were 1,773 coolies for cleaning streets, drains, latrines and water-tables. 426 trollies and rubbish carts, 18 nightsoil carts and 25 sewage and silt carts were used for the removal of filth, sewage and silt in the city. 24 motor lorries were used for the removal of rubbish and filth. These lorries were marched out daily from the Lorry Station and the two Cattle Depots at Harris Road and Krishnampet. The charges incurred for the use of these lorries during 1945-46 amounted to Rs. 1,89,147-13-7. The collection centres at Langs Garden and Krishnampet continued to function. The Basin Bridge Centre which was evacuated by the Military Authorities also functioned during the year. The Pail Depot at Korukkupet worked satisfactorily.

The Drainage Maintenance Section consisting of 1 Drainage Superintendent, 2 Sewer Foremen, 5 Drainage Overseers, 389 coolies and 250 boy coolies was transferred from the Special Works Department to the Health Department from 27-6-1945. The Health Department was made responsible for the cleaning of underground sewers, syphons and storm water drains. The 2 Sewer Foremen were made Conservancy Supervisors and placed in charge of 2 of the 4 ranges into which the city was divided. There were thus 4 Conservancy Supervisors for the 4 ranges in the city. The complement of syphon coolies was transferred from the control of the Drainage Superintendent and placed under the supervision of the Conservancy Supervisors.

Disposal of rubbish:—About 6,75,270 cart-loads of rubbish were removed during the year against 6,14,159 in the previous year. Of these, 1,62,721 cart-loads were used for raising lowlands in the city; the rest of the rubbish was dumped at the Otteri, Korukkupet and Mylapore Dumping Grounds.

Disposal of filth:— 51,502 cart-loads of filth were removed in 1945 against 45,021 cart-loads removed during the previous year. While 12,566 cart-loads of filth were flushed into the sewers at the Pail Depot at Korukkupet, the remaining cart-loads were trenched at the dumping grounds in Otteri and Korukkupet. The amount realised by the sale of manure and cow dung during 1945-46 wasRs. 3,459-9-3.

Public latrines:—347 public latrines existed in the city during the year under report. Of these, 307 were of the flushout type and 40 were masonry and sanded latrines. 13 public conveniences were opened for public during the year at the following places:—

5th divi	ision	Kathbada Road
14th 15th	23	Wall Tax Road Nymianna Najakan Street (annosita ta Amiraina
T90II	"	Nyniappa Naicken Street (opposite to Amirsing Lala Lane)
15th	"	Nyniappa Naicken Street (opposite to Tirumalai
40.3		Lane)
18th	,,	Arundadipuram
22nd	9.9	Poonamallee High Road (opposite to Barnaby Road)
23rd		Ripon Buildings
27th	"	•
27tn	"	Junction of Whannels Road and Poonamallee High Road
35th		
	"	Junction of Brindavan Street and Veerabadran Street
37th	"	Adjacent to Teynampet Fire Station
37th	,,	Junction of Gopathy Narayanaswami Chetty Road
•		and Mount Road
38th	22	Junction of Mount Road and Thyagaraya Road
40th		Thiruvalluvarpettah
TOOTT	,,	TIII a valia vai povali

The public flushout latrines were thrown open for use both day and night. The Drainage Superintendent with his staff of 4 Overseers was made responsible for the proper maintenance of the public conveniences in the 4 ranges of the city.

The conservancy staff paid special attention to the cleaning and disinfection of public latrines and of places where there was committal of nuisance. 556 gallons of disinfectants and 2,491 parahs of chunam and 12,194 lbs. of bleaching powder were used during the year for the disinfection of latrines, drains, roadsides, etc.

Conservancy of private places:— The removal of rubbish and filth from several public institutions and military camps in the city was undertaken as

per section 197 of the City Municipal Act. The total amount realised by way of fees during 1945-46 was Rs. 56,553-11-7.

Labour:— In pursuance of G.O. No. 4942 L & M dated 22-12-1931 coolies retiring on account of old age and infirmity were granted bonus. 176 coolies were provided with tenements in the Corporation Model Lines and 208 coolies were allowed to live in huts on Corporation land.

Cattle depots:— The year opened with 7 conservancy cattle depots. 3 depots were under the charge of Veterinary Graduates and 4 depots were under the charge of Sanitary Inspectors. The existing scale of pay of Veterinary Surgeons was revised on the basis of the grades of salary in the Government Veterinary Service.

Animals:— The number of animals on hand on 1-1-1945 was 705 bullocks as against 751 animals in 1944. 215 animals were purchased during the year as against 132 animals purchased during 1944. 119 animals died during the year as against 163 animals in 1944. 11 unserviceable bullocks were sold during the year, leaving a balance of 790 bullocks at the end of the year. Out of 119 casualties, 69 bullocks died of old age and the rest of other causes.

Foot and mouth disease:— 307 bullocks were affected with the disease from January to May 1945 and in December 1945 in the C, E, F and G Depots and at the Veterinary Hospital. They were all promptly segregated and carefully treated There was no casualty from the foot and mouth disease though the affected animals were much debilitated on account of the severity of the disease.

Anthrax:— There was only one sporadic case of anthrax at F Depot during the year 1945. All preventive measures were promptly carried out and the contacts were protected with anti-anthrax serum.

Piroplasmosis:— There was an ourbreak of piroplasmosis in A and B Depots. All preventive measures were adopted to control the spread of infection. There was no casualty from this disease.

Trypnosomiasis:— 73 bullocks were treated at A, B and F Depots. 63 animals were cured and 10 animals succumbed to the disease.

Tuberculosis:— On the advice of the Disease Investigation Officer and with the approval of the Commissioner, 69 debilitated and condemned bullocks from all the conservancy cattle depots were tested by tuberculin test. Only 27 animals proved positive for tuberculosis, Out of these 27 animals, 10 died and 17 were destroyed in the presence of the Disease Investigation Officer.

1,391 cases were treated for various causes in the conservancy depots and 233 at the Corporation Veterinary Hospital, Vyasarpady.

MOSQUITO CONTROL MEASURES:— Consequent on the additional Supervisor and other staff sanctioned on 8-8-1944 the city was divided into 4 ranges and a Supervisor placed in charge of each of them. This arrangement continued during the year under report. One Overseer and the complement of drain coolies were transferred from the control of the Drainage Superintendent and placed under the supervision of the Medical Officer in charge of anti-mosquito operations from 27-6-1945. As a result of this transfer a more effective system of cleaning drains and carrying out anti-malarial work was organised.

Tanks and ponds:— 396 tanks and ponds existed at the beginning of the year. All of them were constantly inspected and the owners were notified to clean them periodically. 155 of these ponds were cleaned departmentally on payment of charges by the owners. 4 private tanks were cleaned departmentally free of charge on account of their receiving storm water from the surrounding areas. The remaining tanks and ponds were cleaned by the owners themselves and were kept free from mosquito larvae. 9 Corporation tanks were cleaned periodically by the department and larvicidal fishes were bred in them. Several of these tanks supplied larvicidal fish (gambusia) in sufficient quantities for stocking wells, fountains, cisterns and A. R. P. Fire Service static tanks with them. One tank in 1st division was filled up during the year.

Wells:— About 17,123 wells existed in the city. A separate staff examined these wells once in 2 months and introduced larvicidal fish in them after removing all floating matter and aquatic vegetation. 155 new wells were detected. 339 wells were found in a neglected condition. All of them were immediately attended to. To prevent mosquito breeding they were stocked with larvivorous fish. 1,887 wells had Cuddappah slab coverings and 1,901 wells had trap-door fittings. 62 wells were filled up.

The chlorination of 6,000 wells was continued till the end of March 1945.

The fish gangs went round every house during the course of their work to detect larvae breeding in collections of water found in broken vessels, tins, cisterns, tubs, etc. Wherever such facilities for breeding were found they had them destroyed.

Anopheles stephensi (malaria carrier) aedes aegypti (vector of yellow fever and dengue fever) and culex fatigans (vector of filariasis) were found to breed in some wells. These wells were periodically inspected and treated effectively.

Anti-stegomyia service:— Half-a-mile around the Madras Port Trust stegomyia control measures were continued as in the previous years. The mosquito house index ranged from 0.44 to 0.98, the index at the time of commencement of the survey in 1936 being 14.0 and the stegomyia house index ranged from 0.09 to 0.37 against 9.9 in 1936. The stegomyia house index was furnished to the Director of Public Health and to the Port Health Officer.

The staff visited and searched every premises for mosquito breeding places. Larvae found were sent to the laboratory for identification of the species. Instructions to prevent further breeding of mosquitoes were given to every owner or occupier of premises wherein there was breeding. Public offices, institutions and firms were required to take preventive measures against breeding of mosquitoes in fire buckets, cisterns, drains, overhead tanks and wells.

In divisions 1, 4, 5, 18, 20, 22, 26 to 29, 36, 37, 38 and 40 house-inspection squads visited every building and destroyed mosquito breeding grounds. During the course of their work they removed 27,647 old and unserviceable receptacles from the houses visited by them. The mosquito house index ranged from 0.19 to 0.42 as compared with that of 9.5 at the beginning of the campaign in 1937.

Public drains, cesspools, etc:— Mosquito control measures were carried out regularly once a week to destroy and prevent larval breeding in all covered and open drains, ditch drains, cesspools, gully traps, stagnant pits, lowlands, etc. in the city. This work was intensified with the help of the

staff transferred from the Drainage Section in the latter half of the year under report.

River Cooum and Buckingham Canal:— In boththese water-ways a separate gang operated for removing weeds and moss. A special squad was deputed to dust "Paris Green" mixture along the edges of the river and the canal to control the breeding of anopheles mosquitoes.

Reclamation of lowlands:— The following low-lying parts in the city were reclaimed during the year:—

Lowlands in Korukkupet, 5th division.

,, in Pensioners Lines, 5th division.

" in Ammoyammal Street, 17th division.

in Hope Lodge, 17th division.

in Slaughter Houses, 17th division.
in Perambur Tank, 18th division.

" in Perambur Burial Ground, 18th division.

", in Conransmith Nagar, 20th division in Spur Tank Road, 27th division.

in Nehru Park, 27th division in Sterling Road, 28th division.

, in Lodd Govindas Garden, 31st division.

WATER ANALYSIS REPORT:— The water of the Red Hills Lake was filtered by straining it through a layer of few inches of fine sand and by chlorinating it to the extent of making it epidemiologically safe. By this means gross impurities were removed and pathogenic organisms and lower vegetable and animal growths which cause much trouble in the distribution mains by formation of blocks were got rid of. It did not, however, result in the production of an aesthetically good water as the major portion of the organic matter in the lake water existed in a colloidal condition and the filters were unable to retain them. The introduction of mechanical rapid sand filtration, on the efficiency of which the Government Committee on water and sewage purification has reported after experimenting a good deal, would yield water of a high aesthetic value. The average daily quantity of water filtered during the year amounted to 23 91 million gallons.

Red Hills Lake:— The total rainfall recorded for the year in region of the lake was 33·32 inches against 71·33 inches in 1944. The lake water was examined in January, April, July and September during the year. The degree of pollution by organic matter of vegetable origin as shown by high figures for albuminoid ammonia and oxygen absorbed was found to increase in proportion to the seasonal increase of the microflora of the lake, the highest degree of pollution being in September (Statement No.V). The bacterial quality remained fair during January and April. It showed slight deterioration in July and it became fair again in September (Statement No. IV).

Raw Water, Kilpauk End:— The raw water drawn from the Kilpauk end of the raw "water conduit was of a poor bacterial quality. Lactose fermenters were present in 60 c.c. and upwards in 0.4%; in 20 c.c. and upwards in 0.4%; in 10 c.c. and upwards in 2.9%; in 5 c.c. and upwards in 33.7%; in 1 c.c. and upwards in 62% and in 0.1 c.c. and upwards in 0.71% of the samples examined (Statement No. IV).

The chemical quality of the raw water showed a slight deterioration when compared with its chemical quality during the year 1944. There was

an increase in organic matter (Tidy's). The figures for "ammoniacal N" varied from 0.00 to 0.003 part per 100,000, for "albuminoid N" from 0.014 to 0.039 part per 100,000 and for oxidisable organic matter from 0.117 to 0.177 part per 100,000 (Statement No. V).

Chlorinated filtered water mixture:— In the method of treatment of raw water, the depth of the layer of fine sand in the filter beds has been much reduced and no fixed rate of filtration has been adopted with the result that the chemical quality of filtrate has not come up to the expected standard. The filtrate however was efficiently chlorinated so that the yearly average percentage of first class samples (L. F. in —60 c.c.) came up to 100% (Statement No. IV).

Chemically, the figures for "ammoniacal N" varied from 0.00 to 0.002 part per 100,000, those for "albuminoid N" from 0.002 to 0.030 part per 100,000, those for oxidisable organic matter (Tidy's) from 0.079 to 0.126 part per 100,000.

The dose of chlorine applied to the filtered water was between 0.98 to 1.09 p.p.m. for the year (Statement No. 11).

Test tap at K. P. S:— The samples of water drawn from the test tap at K. P. S. were examined daily since they were taken from the water pumped into the mains for consumption. The yearly average percentage of first class samples among those examined during the year was 100%. On the chemical side, all the figures were found to be less than those for the filtrates from filter beds. The yearly average percentage of reduction of organic matter when compared with that of raw water was 29:1% to 40:3% (Statement No. III).

Distribution system:— The yearly average percentage of first class samples was 84.4%. There was a reduction in the figures for chemical constituents as compared with the figures for chemical constituents of test tap samples.

PUBLIC ANALYST'S REPORT:—During the year ended 31st December, 1945 the number of samples analysed in the laboratory was 2,633 as compared with 2,054 in 1944. Of the 2,633 samples, 2,097 were analysed under the Madras Prevention of Adulteration Act, 1918, against 2,038 in 1944. The remaining 536 samples consisted of samples of milk sent by the Health Department in connection with the scheme of milk-supply for priority consumers, besides a few samples of other articles.

Of the 2,097 samples analysed under the Prevention of Adulteration Act, 1,336 samples were genuine and the remaining 761 samples were found to be adulterated. The percentage of adulterated samples during the year under report was 36·3 as against 20·7 in 1944. The high percentage of adulterated samples during the year under report was mainly due to the fact that a large number of milk samples amongst which adulteration was most prevalent was analysed during the year. Milk samples formed 51·5 per cent of the total number of samples during 1945 against 22·4 during 1944.

The samples comprised milk, butter, ghee, gingelly oil, cocoanut oil, coffee powder, tea, ghee substitutes and arrowroot. A statement of the samples analysed during the year under report and of those during five previous years is given in Statement No. I.

Adulteration of milk was greater in 1945 than in the previous year. Adulteration of butter decreased considerably and in the case of ghee the percentage of adulterated samples continued to be low—about 13 %. Adulteration of gingelly oil and groundnut oil continued to be low. Cocoanut oil

samples which were 100 per cent genuine in 1943 and 1944 returned a figure of 21.2 for the percentage of adulterated samples in 1945, the probable reason for this being the abnormal rise in the price of cocoanut oil, which occurred during the year under report. There was a further decrease of adulteration in the case of coffee powder, while tea continued to be genuine.

A comparison of the quality of the ghee sold in shops and by hawkers shows that out of 414 samples taken from shops 25 samples or 6.0 per cent were adulterated, whereas all the 37 samples taken from hawkers were found to be adulterated.

The details regarding the various articles of food analysed during the year under report are given below:—

Milk:— 1,078 samples were analysed. Of these, 618 samples were cow's milk, 338 were buffalo's milk, 105 samples were mixtures of cow's and buffalo's milk and 17 were described as 'milk.'

Of the 618 samples of cow's milk, 325 were found to be adulterated. 318 of them contained added water ranging from 6% to 73%, 5 samples were deficient in fat from 33% to 63% (minimum under the Act—3 per cent). 2 samples contained added water and were also deficient in fat. deficiency in fat being more than could be accounted for by the amount of added water.

Of the 338 samples of buffalo's milk, 181 contained added water ranging from 5% to 79 %. No deficiency of fat was found in any sample.

Of the 105 mixtures, 86 contained added water ranging from 5% to 71%. There was no fat-deficiency in any sample.

All the 17 samples sold as 'milk' without the description 'cow's' or 'buffalo's' were found to be adulterated. They all contained added water which varied from 8% to 78%. No fat-deficiency was noticed in any sample.

Butter:—150 samples were analysed, of which 30 were certified as adulterated. 29 samples contained excess water ranging from 2.2% to 48.2%. Limit for water prescribed under the Act is 20%. One sample contained 1.6% excess water and 29%. of fat other than milk-fat.

Ghee:—451 samples were analysed and 62 were found to be adulterated. Hydrogenated groundnut oil was the commonest adulterant employed and the extent of adulteration varied from 16 % to 98 %.

Gingelly oil:—235 samples were analysed, of which 15 samples were found to be adulterated. Of them, one sample was adulterated with 45% groundnut oil and 15% cocoanut oil and the remaining 14 samples contained arachis (groundnut) oil ranging from 10% to 55%.

Groundnut oil:—31 samples were analysed, of which two consisted of mixtures of 80 % gingelly oil and 20 % of groundnut oil against the provisions of Rule 27-A of the Madras Prevention of Adulteration Rules, 1932.

Cocoanut oil:—33 samples were analysed, of which 7 were adulterated. The adulterant in all the cases was groundnut oil and the extent of adulteration ranged from 10 % to 25 %.

Coffee powder: — 52 samples of coffee powder and one sample of coffee tablets were analysed. The sample of tablets was labelled to indicate that it

contained 60 % coffee and 40 % of chicory and the analysis showed that the indication on the label was correct. Of the 52 samples of coffee powder 3 were adulterated. 2 samples contained roasted and ground Bengalgram (cicer arietinum) to the extent of 30 % and 70 % respectively and the third contained 30 % of roasted and ground peas.

Tea: 5 samples of tea were analysed. All of them were found to be genuine.

Ghee substitutes:— 52 samples were analysed. 25 samples consisted of 100% hydrogenated groundnut oil and the remaining 27 contained ghee varying from 3% to 25% against the provisions of Rule 28 of the Madras Prevention of Adulteration Rules, 1932.

Other article:— 9 samples of arrowroot were analysed. 3 samples described as East Indian arrowroot consisted of 100% starch derived from curcuma angustifolia and were certified genuine. The remaining 6 samples sold as arrowroot were certified adulterated. Of these, one sample consisted of 100% ground rice, 2 samples contained 100% curcuma starch and 3 samples contained 100% tapioca starch (starch of manihot utilissima).

A statement of the other articles analysed in the laboratory, during the year under report, is given below:—

#### Articles analysed

518 samples of milk analysed in connection with the scheme of milk supply for priority consumers.

2 samples of milk from private parties.

1 sample of ghee and 1 sample of gingelly oil from the M. & S. M. Rly.

3 samples of gingelly oil from Midday Meal Centre.

4 samples of ice cream under the Milk Control Order.

1 sample of olive oil from Health Department.

4 samples of rice bran.

2 samples of skimmed milk powder.

#### Report

57 samples adulterated with added water from 7% to 23% and 4 samples deficient in fat from 60% to 75%

One adulterated with 61% added water and the other genuine.

Both unfit for human consumption.

2 samples adulterated with 40 % groundnut oil and the other genuine.

No milk in any sample.

Adulterated with 90% of ground-nut oil.

One infested with insects and the other three contained too much of husk,

Unfit for human consumption.

During the year under report ways and means had to be devised for ensuring the purity of milk supplied to the priority consumers. About 8,000 lbs. of milk were being bought under this scheme. In addition to having samples taken and analysed at the various stages of distribution, it was found necessary to prevent watered-milk being accepted at the source. The Inspectors-in-charge were provided with accurate lactometers and

thermometers and were required to note the specific gravity and temperature for each consignment of milk. If the specific gravity at 85 degrees Fahrenheit expressed in lactometer degrees was below 260, the Inspectors rejected the consignment. There was an attempt to defeat the lactometer test by the addition of cane sugar to watered milk or by the addition of sugar solution to milk.

The following procedure was evolved for the detection of cane sugar in milk. The test can easily be carried out at the place of supply before the milk is accepted. It is based on the Cayaux's test for cane sugar in milk, but with the relative quantities of milk and concentrated hydrochloric acid altered so as to make the test more sensitive.

Procedure:—10 mls. of milk are taken in a boiling tube and mixed thoroughly in the cold with about 0·1 gram resorcinol and 2 mls. concentrated hydrochloric acid. The mixture is boiled gently for a few minutes, allowed to stand for a minute or two and the colour compared with that of milk free from cane sugar similarly treated. A distinct rose-red colour is obtained with 0·2% of cane sugar as against no colour or pale yellow colour in the case of milk free from cane sugar.

A statement of the action taken on the adulterated samples of 1945 and the adulterated samples of 1944 pending disposal on 1st January, 1945 is given in Statement No. II.

The number of samples reported as adulterated during the year under report was 761. Action taken in respect of these samples comprised warning of the vendors in the case of 52 samples, seizure and forfeiture of the articles in the case of 61 samples and prosecution of the vendors in the case of the remaining 648 samples.

Of the 648 prosecutions launched, vendors were convicted in 487 cases, 10 cases were withdrawn, 3 were acquitted and 148 were pending disposal on 31st December, 1945. Among the 106 cases of 1944 pending disposal during the year under report, 82 convictions were obtained.

Thus the total number of convictions during the year under report for the sale of adulterated articles of food was 569 against 254 in 1944. The amount of fines imposed in 1945 was Rs. 32,289 against Rs. 14,981 in 1944. The average fine per conviction during 1945 was Rs. 57 as against Rs. 59 in 1944.

Besides the above, 6 milk vendors were convicted under Section 14 (3) of the Prevention of Adulteration Act for preventing the Inspectors from taking samples. The total fines in these cases amounted to Rs. 220 which works out at an average of Rs. 37 per conviction. It may be pointed out that fines imposed for offences under this section ought to be much more deterrent.

During the year under report, an important decision was given by the Madras High Court as to whether the frying medium could be termed an ingredient of a sweetmeat even though it might enter into the composition of the sweetmeat as a result of the frying. The case was taken to the High Court on appeal against acquittal on this point in the Magistrate's Court. The High Court agreed with the Magistrate and ruled that the frying or cooking fat cannot be covered by the term 'ingredient.' The Government have since amended Rule 28-8 of the Madras Prevention of Adulteration Rules so that the term 'ingredient' in the Rule would now include the cooking fat entering into the composition of the sweetmeat.

## Report of the Port Health Officer on the working of the Port Health Department, Madras.

During the year 693 vessels arrived in Madras Port; of these only four ships arrived infected, one with cholera, one with smallpox and two with chickenpox. All necessary preventive measures were taken in each case. The total number of crew and passengers inspected on these vessels were 52,421 and 36,270 respectively.

Altogether 682 vessels departed from Madras of which 135 vessels leaving for foreign ports were inspected before departure. No member of crew or passengers was rejected for any infectious disease at the time of medical inspection. Also no crew or passenger was rejected by the ship's surgeon at the time of medical inspection. The total number of crew and passengers inspected on these vessels were 7,855 and 204 respectively.

The provisions of the Lascar crew of ten ships were inspected during the year. Three samples of rice, one sample of ghee and one sample of lime juice were sent to the Chemical Examiner for analysis. Of these, the sample of lime juice and one sample of rice were reported to be unfit for human consumption. Both the Masters and the Agents of the vessels concerned were made to replace the unwholesome stock by genuine articles.

European crew provisions were also examined on six vessels due to complaints received from the masters of the ships. Due to adverse reports from the Chemical Examiner, three consignments of flour, two consignments of meat and one consignment of tinned provisions were condemned and replaced by genuine stock.

The Madras Port Trust did not undertake anti-rat measures in the port. So the preventional measures of rat access to vessels from the wharf were only practised by the masters of the vessels acting under the instructions of the Port Health Officer according to Rule 60A of the Indian Port Health Rules. Routine inspection by the Port Health Officer to enforce anti-rat measures proved a success as the masters of vessels fully co-operated.

The sanitation of the Port area is looked after by the Madras Port Trust and is maintained satisfactorily. The Port Trust employed two overseers and four lascars regularly throughout the year to examine temporary breeding places and stagnant rain water collections in the Port area which were drained away as soon as noticed. The mosquito nuisance was much reduced since the Trust took up anti-mosquito work. The Aedis index was shown to vary between 0.5 and 0.1 during the year.

At the request of the Chairman, Port Trust, 42 consignments of damaged foodstuffs were examined by the Port Health Officer of which only six consignments were found to be fit for human consumption and the rest were condemned.

The Port area as well as ships were supplied with drinking water from the Corporation Main through Port Trust reservoir tanks, which were periodically cleaned. No complaints were received from the masters of ships regarding the quality of water during the year. Water barges were periodically cleaned and kept in suitable sanitary condition.

### Annual Report of Maternity and Child Welfare Scheme, Corporation of Madras, for the year 1945.

I submit herewith my report of the Child Welfare Scheme for the year 1945.

A perusal of the report will indicate that the maternity and child welfare work in the city made a steady and satisfactory progress during the year. The outstanding features are the appreciable reduction in the maternal mortality, the marked increase in the number of prenatal and labour cases that came under the care of the Child Welfare Scheme and the introduction of the free milk supply scheme to priority consumers.

Centres:— At the commencement of the year under report, there were 16 child welfare centres and 7 maternity wards. The Council, at its meeting held on 8-5-45, sanctioned the opening of a child welfare centre with a maternity ward in the 14th Dn. and 2 maternity wards in 2 other centres. At its meeting held on 19-6-45 the opening of three more child welfare centres at Teynampet, Adyar and Periamet was sanctioned by the Council. The centres at Adyar and Periamet were opened on 11-2-46 and 7-3-46 respectively. The third centre at Teynampet could not be opened for want of a suitable building. At present there are 19 child welfare centres and 10 maternity wards in the city.

Staff:— The Lady Superintendent continued to be in charge of the Scheme. There were 17 Lady Doctors of whom one was a relieving Lady Doctor. Four M.B.B.S. Lady Doctors took up War Service with a lien on their posts in the Corporation and in their places experienced L.M.Ps. were appointed. There were 22 qualified Health Visitors and 5 general trained nurses working as acting Health Visitors in the C.W.S. The latter were taken temporarily owing to the dearth of qualified Health Visitors and the pressure for additional Health Visitors. 146 midwives continued to work in the C.W.S.

Pre-natal Clinics:— Pre-natal clinics were held thrice a week in each centre and expectant mothers were advised by the Health Visitors during their visits to attend the clinics. 2,574 pre-natal clinics were held in various centres and 20,622 new expectant mothers attended the clinics and sought medical advice and treatment against 15,303 in 1944. The Health visitors registered 21.033 expectant mothers in the homes of the patients. They were advised by the Lady Doctors and were followed up by the Health Visitors till their confinement. The clinics having gained popularity, a large number of mothers were benefitted by the instructions, advice, treatment, etc. with the result that the maternal mortality rate has come down to 1.57 per mille during 1945 against 2.2 per mille in 1944.

Maternity service:— Out of 30,549 births in the city 14,002 labour cases including 103 twins came under the care of the Scheme of which 11,671 were non-Muslims and 2,331 were Muslims. 1,873 births were conducted in the maternity wards during the year 1945. There was an appreciable increase in the number of labour cases conducted by the C.W.S. the percentage being 45·3 against 40·6 in 1944 and against 38·1 in 1943. The midwives paid 1,52,167 visits and the Health Visitors 1,35,933 visits in the homes of patients. The Lady Doctors paid 18,456 visits.

A sum of Rs. 3,201 was realised as fees for maternity services rendered to persons whose income ranged from Rs. 50 to Rs. 200 per mensem against Rs, 1,950-4-0 for 1944. This indicates the popularity of the Scheme among the middle class people also.

Maternal mortality:— Out of 14,002 cases of labour that came under the care of the Scheme there were 22 cases of maternal mortality as noted below which works out to 1:57 per mille against 2:2 per mille for 1944.

Infantile mortality:— 10,591 babies born in the year 1944 were kept under observation during their first year of life. 344 were still births. The mortality among live births was 1,299. 1,093 infants left the city or were otherwise not traceable and 7,855 infants were alive after completion of their first year. The infantile mortality rate was 141.9 per mille against 140.6 per mille in 1944.

Out-patient clinics:— Out-patient clinics were held in all the centres by the Lady Doctors where infants, pre-school children expectant and nursing mothers were examined, advised and treated for minor ailments. 2,418 clinics were held for infants, toddlers and nursing mothers. 32,415 new infants, 21,538 toddlers and 14,263 new nursing mothers were treated and advised. The total number of new cases that attended the clinics was 1,18,838 and the number of old cases was 2,47,491 and the grand total was 3,66,329. The dispensary work which was conducted in the child welfare centres for one hour in the evenings for women and children had to be closed from 1-5-46 under the orders of the Government (vide Govt. review on the Commissioner's Administration Report for 1944-45.)

Ambulance:— The Scheme maintained an ambulance car to convey emergent cases of labour to various hospitals in the city and there were 617 requisitions for the same.

Milk supply:—The milk supply scheme for distribution of milk through the Child Welfare Centres to expectant and nursing mothers, infants and children upto the age of 5 years belonging to families whose income is less than Rs. 50 p.m. was introduced by Govt. from 1-5-45. During the year under report 6,83,055 infants, 4,55,574 toddlers, 1,98,814 expectant mothers and 1,13,931 nursing mothers were given free milk. The expectant and nursing mothers were given 12 ollocks of milk once a day, pre-school children (2 to 5 years) were given 1 ollock of milk once a day, toddlers (1 to 2 years) were given one ollock of milk once a day and infants twice a day ranging from ½ ollock to 1½ ollocks according to their ages. Periodical weights were taken in respect of infants and toddlers and appreciable improvement was noticed in their weight and health. Generally all the priority consumers showed definite signs of improvement in their health. If the milk supply scheme is continued for some time more, the women and children of Madras will be much benefited and this may to some extent reduce the neo-natal mortality. Milk was being distributed in 19 child welfare centres and 10 dispensaries till the end of this year. After the extension of the city limits on 1-4-46 milk is being distributed at Saidapet, Sembiam and Adyar also.

Maternity Homes:— The maternity wards opened by the Corporation are becoming popular and in some centres there is a great demand for more beds but they could not be increased for want of suitable accommodation. There is a proposal to construct a ward in the upstairs of Washermanpet Child Welfare centre, which is a Corporation building. Arrangements are being made to open a child welfare centre with maternity ward with 12 beds in the Saidapet Municipal Office building and another in Sembiam Panchayat Board Office building with 4 beds.



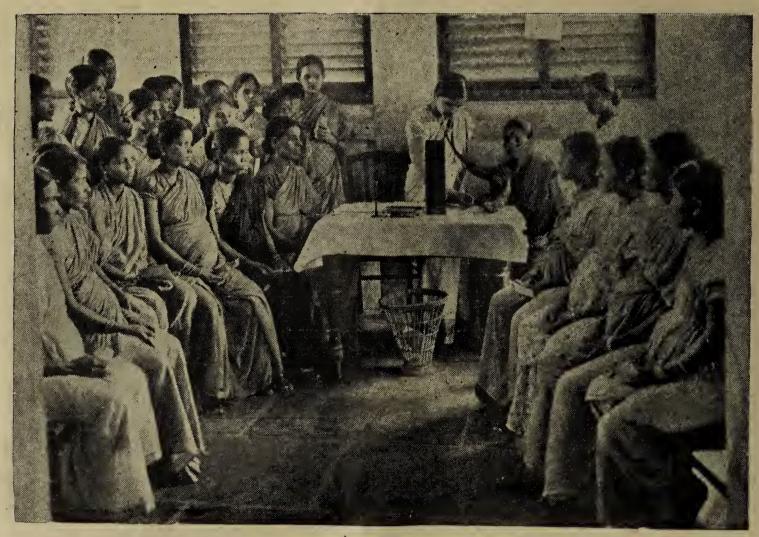
Distribution of milk to infants and toddlers (Child Welfare Centre, Chulai)



Queue system adopted by expectant and nursing mothers (Child Welfare Centre, Periamet)



Infants and toddlere waiting to receive the benefit of milk supply for the first time, Child Welfare Centre, Chulai



Pre-natal clinic at the Child Welfare Centre, Trevelyan Basin

A considerable portion of the work of C. W. S. is of an educative nature and it is being carried on more in the houses than in the centres. More intensive propaganda is essential, if we should fight out illiteracy, ignorance and superstition among women. It is therefore proposed to increase the number of Health Visitors as soon as they are available so that every infant born in the city could be taken on for regular and more frequent visits. With an adequate staff of Health Visitors such visits can be continued until the children reach the school going age and every visit can be profitably availed of for doing useful propaganda among the women in the house.

H. V. KAMALAMMAL,

18-6-1946.

Lady Superintendent, C. W.S.

The immediate aim of the Corporation is to have one child welfare centre for every two divisions and a maternity ward for every two centres. We have very nearly realised this objective during the year but for one more child welfare centre which will be opened shortly.

It is my desire that the city should have a child welfare centre in every division and a maternity ward for every two divisions. The next few years will, it is hoped, see the realisation of this ideal.

A Maternity Home with 40 beds which has been donated by a philanthropist is nearing completion and will soon be opened for the benefit of the poor.

J. P. L. SHENOY,

30-6-1946

Commissioner.

Showing births, deaths and infantile deaths registered in each division during 1945

ì	red		
, i	births registered	1888889389 38888888888888888888888888888	1,107
ths	Tate per 1000 1000 live births stered	249.00 242.12 242.13 242.13 241.41 333.63 332 332.63 332.63 332 332.63 332 332 332 332 332 332 332 332 332 3	213.82
Number of infantile deaths registered with death rate	[ [EtoT	1113 1143 1143 1157 1274 1349	6,532
mber of i	<u>R</u> emales	. 38 111 123 123 124 125 125 126 127 128 128 128 128 128 128 128 128 128 128	3,073
Nu	Males '	25.256 998 88 7.7 1.12 1.12 8.88 8.8 1.13 9.5 1.	3,459
iths	[stoT	466 1078 1078 1078 1070 477 409 1091 1091 1093 1093 1093 1093 1093 10	27,277
Number of deaths registered	Females	211 211 211 211 211 211 211 211 211 211	12,775
Nuı	Males	306 648 648 648 271 271 1198 1111 1159 1111 1159 1111 1159 1111 1159 1111 1159 1111 1159 1111 1159 1111 1159 1111 1159	14,502
ths	LetoT	454 683 1301 11301 11301 11301 11301 472 880 880 880 880 880 880 880 880 880 88	30,549
Number of births registered	Females	236 246 6659 6611 2360 11519 2360 2360 2360 2360 2360 2360 2360 2360	14,927
Nuı	Males	218 234 234 234 235 235 235 235 236 236 237 237 237 237 237 237 237 237 237 237	15,622
Area	in acres	1674-11 284-42 283-52 335-94 853-06 98-94 91-97 204-80 67-26 80-00 95-42 66-50 149-25 98-11 217-66 69-76 1339-58 1224-13 2320-40 334-91 747-20 555-98 126-72 88-58 88-54 143-23 736-70 191-81 112-64 89-02 679-68 875-14 112-64 89-02 679-68 875-14 1725-14	18,813-44
,	divisions		Total
	Names of di	New Washermenpet Royapuram Singara Garden Sanjeeviroyanpet Korukupet Harbour Muthialpet Kachaleeswarar Koil Ammen Koil Kothawal Bazaar Seven Wells Sowcarpet Peddu Naickenpet Trevelyan Basin Park Town Edapalayau Vyasarpady Perambur Choolai Kosapet Perambur Choolai Kosapet Purasawalkam Kilpauk Vepery Napier Park Chintadripet Romaleswaranpet Egmore Thousand Lights Nungambakkam Thiruvateeswaranpet Chepauk Triplicane Zam Bazaar Mirsahibpet Royapettah Teynampet Triplicane Zam Bazaar Mirsahibpet Royapettah Teynampet Theayagarayanagar	
suc	Disivid	1989 988 988 988 988 988 988 988 988 988	-

APPENDIX

rədmun latoT adtridilo bərə‡siyət	454 683 1,381 1,135 1,135 1,135 1,135 1,135 1,135 1,135 1,135 1,267 1,267 1,096 659 1,069	.30,549
 Дөсөшрөт	100 100 100 100 100 100 100 100 100 100	3,965
Точетрет	1121 1121 1122 1133 123 123 133 133 133	2,797
төфотэО	1112	3,161
September	101 101 1037 1037 1037 1037 1037 1037 10	2,671
<b>1</b> sn\$n∀	11138 11138 11139 1123 1123 1133 1133 1133 1133 113	2,918
July	1114 2 11174 2 11174 2 11174 2 11174 2 1174	2,458
June	128 8 8 2 2 4 4 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	2,851
VsM	2445 6685 6685 6685 6685 6685 6685 6685 6	2,120
firqA	84084084888888488888888888888888888888	2,054
Матсћ	84779994444969449888888889894899489894898	2,191
February	018000004419888448866408004488888888888888888888888	1,580
Yisunst		1,783
		Total
Names of Divisions,	New Washermenpet Royapuram Singara Garden Sanjeeviroyanpet Korukupet Harbour Muthialpet Kachaleeswar Koil Ammen Koil Kothawal Bazaar Seven Wells Sowcarpet Fedupalayam Vyasarpady Perambur Choolai Kosapet Pursawalkam Kilpauk Vepery Napier Park Chintadripet Komaleswaranpet Egmore Ihiruvateeswaranpet Chepauk Triplicane Zam Bazaar Mirsahibpet Royapettah Teynampet Theogarayanagar Miylapore Adyar	5000
,anoisivid	1004r06r00010000010000000000000000000000	
н—9		

Total Number of Deaths registered.

December

Divisions.

APPENDIX

27,277

2,524

asies to	o to .oK n gnoms ob 001 H gnoms	111	114
ядея	Total	466 1078 1270 1270 1220 477 604 301 1003 409 1003 409 409 409 409 409 409 409 409 409 409	27,277
Total of all a	Females	22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	12,775
T	Males	306 648 648 648 648 648 648 648 648 648 64	14,502
60 years	and	108 108 1115 102 103 103 104 104 105 106 107 108 108 108 109 109 109 109 109 109	4,997
50 to 60		20	2,178
40 to 50	year	106 23 33 33 34 55 55 55 55 55 55 55 55 55 55 55 55 55	2,152
30 to 40	year		2,134
0 20 to 30	year	1000 1000 11130 1130 1130 1130 1130 113	2,311
15 to 20		333 33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	723
10 to 15		6411888888338888888888888888888888888888	579
5 +0 10	years	20000000000000000000000000000000000000	1,149
		2523 2045 2045 2045 2045 2045 2045 2045 2045	4,522
Under	one	1113 1443 1157 1157 1153 1153 1153 1153 1153 115	6,532
	,		Total
	Names of divisions	New Washermenpet Royapuram Singara Garden Sanjeeviroyanpot Korukupet Harbour Muthialpet Kachaleeswar Koil Ammen Koil Kothawal Bazaar Seven Wells Sowcarpet Trevelyan Basin Park Town Edapalayam Vyasarpady Perambur Choolai Kosapet Purasawalkam Vyasarpady Rerambur Choolai Kosapet Trevelyan Basin Fark Town Edapalayam Vyasarpady Rerambur Choulai Kosapet Trevelyan Basin Fark Town Edapalayam Vyasarpady Rerambur Choulai Kosapet Trevelyan Basin Fark Town Fapalak Wapier Park Chousand Lights Nungambakkam Thiruvateeswaranpet Chepauk Triplicane Zam Bazaar Mirsahibpet Royapettah Teynampet Theagaroyanagar Mylapore	
snoi	sivid	1008746333333333333333333333333333333333333	

Divisions

diseases during 1945 Showing deaths registered in each division according to principal

the year 301 942 758 1003 409 1091 706 1118 681 843 462 678 669 669 669 385 502 406 751 517 466 1078 1270 1220 477 477 604 574 579 352 rotal Deaths unb bereteig 27,277 170 454 480 689 215 506 5322 5322 3324 3384 3384 336 336 343 343 419 508 357 389 351 662 13,987 All other causes Maternal deaths 820024884981884 155 zsiruţuI E870448811884814 Diseases 55 128 431 103 103 184 71 71 170 51 227 82 58 58 76 153 268 147 165 77 217 217 145 91 145 98 98 6,009 Other Respiratory Tubercle including Tubercle of Lungs 410 Dysentery and Distriboes 20 132 151 78 151 78 125 46 73 48 126 99 90 69 12 77 62 68 28 28 21 30 30 30 3,003 Отрег Речегя 2,963 Malaria Enteric 126 Measles Small-pox 233 Cholera Total Names of divisi Thiruvateeswaranpet New Washermenpet Peddu Naickenpet Theagarayanagar Komaleswaranpet Kachaleswer Koil Kothawal Bazaar Seven Wells Sanjeeviroyanpet Thousand Lights Nungambakkam Trevelyan Basin Singara Garden Purasawalkam Vepery Napier Park Triplicane Zam Bazaar Mir Sahibpet Chintadripet Pudupakkam Edapalayam Ammen Koil Royapuram Park Town Vyasarpady Royapettah Muthialpet **Teynampet** Korukupet Sowcarpet Mylapore Adyar Perambur Harbour Egmore Chepauk Kosapet Kilpauk Choolai 1008-300-8001

15413

APPENDIX

Showing deaths during 1945 compared with deaths during the previous five years

2	Deaths.	oiteA		33.98	35.44	22.67	37.59	36.19	33.17	32.71
	Total.	Deaths		26125	27710	18019	30366	29705	26385	27277
	4	oitsA		17.03	17.53	11.47	18.51	18.66	16.64	16.77
i	All othe causes.	Deaths		13090	13709	9113	14953	15318	13237	13987
-	th in id	Ratio		264 7.94	8:69	7.46	9.32	6.83	8.05	2.02
	Death from child Birth.	Deaths		264	285	154	275	178	231	155
	ries.	OitsA		0.3	0.3	0.3	0.3	0.3	0.3	0:39
	Injuries	Desths		234	239	209	276	202		313
	sessesib	OitsH		7.83	8.34	5.15	9.73	8.73	96.2	7.21
-	General Respiratory	Deaths		1:38 6016	0,73 6523	0.384093	0.49 7857	0.357166	0.67 6331	0.49 6009
do do	luber- ulosis.	oitsA								
	Tuber- culosis.	Deaths		1064	572	301	398	290	525	410
ur.	Diarrhoea.	oiteA		4.36 10	4.91	2.83	4:36	4.56	4.14	3.60
-	Dysentery and	Deaths		3352	2.94 3838	1.69 2251	2.903521	3.27 3498	2.66 3292	3.55 3003
	Other evers.	oitsA		2.49	4	1.69		3.27		•
*	Other	Deaths		0.161918	0.262302	0.16 1341	0.112345	0.08 2687	0.152119	2963
	eric	Ratio								0.11
	Enteric Fever.	Deaths		125	1 206	3 128	3 90	99	123	95
	.sirslsM	oitsA		0.04	0.0	0.03	80.0	0.1	90.0	90.0
		Deaths		3.29	7.30	27	5 67	1 82	2 47	2 46
	Measlos.	oiteA	ī	0.003	0.007	:	0.002	0.001	0.003	0.003
	· K	Desths		5	1 9	~~~	9	6 1	05 2	65
	-II-x	Ratio		0.04	900.0	0.03	0.016	0.16	0	0.53
	Small- pox.	Deaths		31	TC.	1 18	9 13	2 128	2 39	7 192
	*NTOLOUIO	Ratio		:	•	0.11	0:49	0.05	0.12	20.0
	Cholera.	Deaths		•	:	06	1 400	16	101	19
	Plague.	Ratio		•	:	:	0.001	:	•	
		Deaths		:	•		-	:	Φ.σ.:	
	Year.			1940	1941	1942	1943	1944	Mean of the last 5 years.	1945
Н	<u>—</u> 10									

STATEMENT No. VII

Showing births and deaths from some of the principal causes during 1945 and the preceding 10 years

		AF	PEI	IDI	X							
Infantile deaths under one year of age.	Rate per 1000 live bgeredtid	223.9	216.5	8,022	222.1	241.62	205.70	208.94	92.961	247.30	284.27	213.82
Infandeath under year age	No. registered	6948	10-1 6318	6836	6881	7.747651	7.94 6837	6847	7.464062	9.327295	6.837407	5.07 6532
-sdtseb	Rate per	9.5		9.3	3.5			69.8				
IsaretsM	No. registered	295	294	289	284	245	264	285	154	275	178	155
Respira- tory diseases.	Rate per 1000	6.8	6.8	1.6	8.1	9.36	7.83	8.34	5.15	9.73	8-73	7.21
Respira tory diseases	No. registered	6254	5410	9299	8809	1.83 7166	1.386016	86523	34093	0.49 7857	0.35 7166	0.49 6009
Tuber-	registered registered 10001	9 1.7	6 1.6	5 1.6	1 1.7			2 0.73	1 0.38			
Tr	.oV	1209	1136	1155	1301	3 [400	6 1064	1 572	3 301	938	062 9	0 410
and dysentery.	registered Rate per 1000	20 3.3	3.1	33 2.9	3.1	4.73	52 4.36	88 4.91	51 2.83	21 4.36	8 4.26	3 3.60
seodrisia	1000 No.	3 2320	5 2208	8 2133	9 2308	2.75 3624	2.493352	2.94 3838	1.69 2251	2.90 3521	3.27 3498	3.55 3003
Other	registered reg ets	2305 3.3	799 2.5	36 2.8	0,5		918 2.	302 2.	341	345 2.	887 3.5	3963 3.4
	1000 No.	0.2423	0.1617	0.11 2036	0.072183	0.062108	0.0419	0.0423	0.03 13	0.08 23	_ <u>ex</u>	0.0629
Malaria.	beretsiger req retail	167 0	113 0	78 0	50 0	43 0	29 0	30 0.	27 0	0 29	82 0.1	46 0
	1000 1000 No.	0.56	0.23	0.13	0.16	0.53	0.16	0.56	0.16	0.11	80.0	0.11
Enteric.	No. registered Rate per	186	163	96	119	187	125 (	908	128 (	06	99	95 (
sles.	Rate per 1000	0.01	200.0	0.01	0.01	:	0.003	0:001	:	0.002	0.001	0.003
Measles.	No. registered	2		∞	. ∞	:	63		:	4		cs
Smallpox.	Rate per 1000	80.0	0.004	0.27	2.0	0.35	0.04	900.0	0.03	0.016	0.16	0.23
Smal	o M bėretsiger	59	က	196	561	268	31	2	18	13	128	192
era.	Rate per 1000	0.51	0.19	0.32	0.02	0.003	:	:	0.11	0.49	0.05	0.02
Cholera.	oN benetsiger	145	140	232	36	63	:	:	06	700	16	19
Plague.	Rate per 1000	:	:	:	•	•	:	:	:	0.001	:	
Pla	No. registered	:	:	:	:	•	:	:	:	-	:	
ths.	Kate per 1000	35.3	32.8	34.9	35.0	38.92	33.98	35.44	22.67	37.59	36.19	32.71
Deaths.	No. regd. excluding still births.	24955	23660	25674	26282	29808	26125	27710	18019	30366	29705	27277
ths.	Hate per 1000	43 9	40.5	42.1	41.3	41 34	43.23	41.91	25.97	36.51	31.74	36.63
Births.	No. of live births.	31031	29189	30958 42·1	30985	31665	33238	32770	20644	29498	26056	30549
	Year.	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945

Showing births, deaths and infantile deaths with rates by months in 1945 and 1944

STATEMENT No. VIII

		=	1945	15			-		19	1944		
Months	Births	Birth Rate	Deaths	Death Rate	Infantile Deaths	Infantile Death Rate	Births	Birth Rate	Deaths	Death   Rate	Infantile Deaths	Infantile Death Rate
January	1,783	25.7	2,902	41.8	208	397.1	1,860	27.2	3,034	44.4	654	408.1
February	1,580	2.2.2	2,647	38.1	569	360-1	1,794	2.9%	2,662	38.9	618	344.5
March	2,191	31.6	2,546	36.7	469	214.1	2,135	31.2	2,779	40.6	202	331.1
April	2,054	9.67	2,332	33.6	555	270.2	2,083	30.5	2,578	9.28	613	294.3
May	2,120	30.5	2,217	31.9	202	239.1	2,489	36.3	2,571	37.5	621	249.5
June	2,851	41.0	2,053	9.67	489	171.5	2,187	31.4	2,158	31.3	482	220.4
July	2,458	35.4	1,939	6.22	440	179.0	1,838	6.9%	2,112	30.9	547	9.262
August	2,918	40.8	1,892	27.2	493	169.0	2,202	32.2	2,436	35.6	630	286.1
September	2,671	38.4	1,983	28.5	486	181.9	2,305	33.7	2,040	8.62	504	218.7
October	3,161	45.2	2,171	31.2	538	170.2	2,301	33.7	2,053	30.0	554	240.8
November	2,797	40.5	2,071	29.7	589	210.6	2,287	33.4	2,004	29.3	518	226.5
December	3,965	57.0	2,524	36.6	689	173.8	2,575	37.6	3,278	47.9	854	331.7
Total	30,549	36.63	27,277	32.71	6,532	213.82	26,056	31.74	29,705	36.19	7,407	284.27

STATEMENT No. IX

VITAL STATISTICS

Showing percentage of infantile deaths from principal causes in 1945

editasini Pesthe	oitsA	22.1	15.2	37.6	25.1	1:
[stoT]	Desths	1440	994	2458	1640	6532
csuses	oitsA	12.9	13.6	21.0	16.2	17.0
Tedto IIA	Deaths	185	135	516	274	28.2 1110
system	oitsA	3.1	10.5	38.8	45.2	28.5
-sriqeeA	Deaths	45	101	954	741	6.7 1841
meass	oitsA	2.3	7.5	9.4	2.9	2.9
Nervous	Deaths	32	75	231	101	439
28 ytilideU -smroilsm noit		2.62	63.2	11.7	2.5	32.2
Premature Birth, Con-		1148	628	285	41	2102
seoditsid	OiteA	8.0	3.5	11.3	16.4	0.6
Dysentery and	Deaths	12	32	278	269	591
	oitsA		8.3	4.2	11.9	6.4
Other Fevers	Deaths	18	23	183	195	419
	oitsA	•	•	0.04	0.5	1.0:1
sirslaM	Deaths		-:		⋪	23
COLOMOTAL	oitsA	e de an	:	•	0.1	0.01
"Measles"	Deaths	:	:	**************************************	hond	-
*Od=IIBIIIO	OiteA	:	•	0.4	0.8	7.0
xoq-llsm2	Deaths	:	= :	10	14	24
		82	th	su	under	
Age-periods	•	seven days	ven days and inder one month	e month and inder six months	months and use year	Total
A	-, ]	Under	Seven da under	One mor	Six mo	

2707	1945
	during
•	divisions
11	the di
•	IO
	each of the c
•	11
	performed
	raccination
و	ot v
	particulars
	Showing 1

_ E	0 4	TOMEN.		1
	hich the results re known	Revacoi-	80444646801110884446486611144464664616 555664616668186861665666	4.4
of su	which the results were known.	Primary.	0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	99.4
		Unknown.	10000000000000000000000000000000000000	950
tion.		Successful.	23 24 4 20 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	101
Re-vaccination	•	.lstoT	14061 124442 1244423 109033 115544 115544 115544 115544 115544 115634 115634 115634 115634 115634 115634 115634 115634 115634 115634 11563	3273
Re-v	Total.	Females.	65888 665888 665888 665888 67423 6365	
		Males.	124 28 28 28 28 28 28 28 28 28 28 28 28 28	1801
		Опкложа.	::::::::::::::::::::::::::::::::::::::	
	ul.	Total.	2525 11126 11110 1110 1110 1110 1110 1110 1110 1110 1110 1110 1110 1110 1110 1110 11	462
tion.	Successful	6 years	81.0548484844 : : : : : : : : : : : : : : : :	30
Vaceination	Su	One year and a tabus.	222 222 223 223 223 223 223 223 233 233	133
Primary v		Under one sge.	24444 24	299
Prin		Total.	225 11126 11113 11	479
	Total.	Females.	266 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	278 201
}		Males.	256 256 256 256 256 256 256 256	278
sons		Total.	14586 9733 13568 15701 13440 11364 12295 12295 12295 12295 12497 12497 12495 10483 10483 10483 10483 10485 12548 125548 125548 12554	3752
Total No. of persons	Vaccinated	·#emale#•	6627 7146 7123 7146 7233 7146 7233 7119 7233 7119 7233 7119 7233 7233 7233 7333 7333 7333 7333 733	1673
TotalN	Va	Males.	7959 4681 6422 7117 6210 7259 7117 6210 7259 7117 6210 7259 71756 4595 71756 4595 71756 71	2079
				:
				•
		ž		
	Names of Divisions			
	of Di		το Ε.	
	e me		nenpet koil Koil Koil konpet sin m m karan	
	7		shern am Gard Gard royar royar swar ells ells alcke in Ba wn sady ir ripet swar ripet ripet swar ripet ripet swar ripet ripet ripet ripet swar ripet	
			New Washermenpet Royapuram Singara Garden Sanjeeviroyanpet Korukupet Harbour Muthialpet Kachaleswar Koil Ammencoil Kothawal Bazaar Seven Wells Sowcarpet Peddu Naickenpet Trevelyan Basin Park Town Edapalayam Vyasarpady Perambur Choolai Kosapet Purasawalkam Kilpauk Vepery Napier Park Chintadripet Komaleswaranpet Egmore Triplauk Vepery Napier Park Chintadripet Komaleswaranpet Chenyakam Triplauk Triplicane Zam Bazaer Mirsahibpet Royapettah Triplicane Zam Bazaer Mirsahibpet Royapettah Teynampet Triplapore	lyar
			- AHOOMA CO. CO.	
	.anoisi	DIA	23333333333333333333333333333333333333	200

APPENDIX

VACCINATION	17		Showing	vaccina	tions per	formed	luring ea	Showing vaccinations performed during each month in 1945	in 1945		STA	STATEMENT No.	T No. II
			P	Primary V	Vaccination.	n.				Re-Vaccination.	ination.		
Month.		Num	Number of pers Vaccinated.	persons ted.		Results.		Number of Vaccin	1 00	persons		Results.	
		Males.	Females.	Total.	Success-ful.	Failure.	Un- known.	Males.	Females.	Total.	Success-ful.	Failure.	Un- known.
January	:	1,196	1,270	2,466	2,400	9	09	14,982	13,974	28,956	006	17,148	10,908
February	:	1,351	1,410	2,761	2,748	8	Ħ	23,424	18,537	41,961	1,211	27,183	13,567
March	•	1,510	1,313	2,823	2,736	9	81	27,513	23,492	51,005	1,550	27,671	21,784
April		1,211	1,118	2,329	2,295	2	27	22,928	17,336	40,264	894	23,212	16,158
May	•	1,201	1,153	2,354	2,300	24	30	24,680	16,691	41,371	533	16,959	23,879
June	•	1,225	1,101	2,326	2,301	12	13	15,934	13,272	29,206	877	14,367	13,962
July	:	1,306	1,139	2,445	2,430	6	9	16,438	11,577	28,015	634	14,583	12,798
August	•	1,185	1,016	2,201	2,172	6	20	14,274	11,691	25,965	561	17,419	7,985
September	•	1,328	1,217	2,545	2,520.	w	30	14,290	11,641	25,931	604	17,176	8,151
October	•	1,369	1,165	2,534	2,513	12	6	13,766	11,424	25,190	069	16,323	8,177
November	•	1,356	1,245	2,601	2,584	<b>-41</b>	13	8,390	8,883	17,273	629	10,655	5,959
December	•	1,501	1,293	2,794	2,782	∞	4	8,060	7,953	16,013	517	10,741	4,755
Total		15,739	14,440	30,179	29,781	104	294	2,04,679	1,66,471	3,71,150	9,630	2,13,437	1,48,083

MEDICAL RELIEF

STATEMENT No. I

Showing cases treated in Corporation Dispensaries in 1945

Serial Number.	Name of dispensary.	ear in which the dispensary was opened.	New cases.		of cases	No. of	perforned.	arks.
Serial		Year in dispens		1945	1944	1945	1944	Remarks.
1	Royapuram Dispensar	1924	25140	60991	72318	479	174	
2	Royapuram Siddha Dispensar	1944	24096	51358	11462			Opened on
3	Washermanpet ,,	1913	50065	110696	110539	427	465	5-10-44
4	Harbour ,,	1929	37984	81468	125485	306	328	
	Mannady Unani ) " Mafuskhan "	1938 1923	21721 37026	55398 77904	49303 84478	26 112		
7	Mint Street,	1923	50496	108521	120980	246	<b>15</b> 3	
8	Trevelyan Basin ,,	1919	28682	60342	84638	71	251	
9	Perambur ,,	1928	25549	51563	61415	250	289	
10	Vyasarpady	1929	32469	74378	62782	478	438	
11	Kosapet	1929	37604	75708	72270	580	5 <b>2</b> 2	
12	  Baliah Naidu ,	1899	37565	79647	58592	292	244	
13	Kilpauk .	1919	36592	71846	70070	193	209	2 2
14	Nungambakkam ,	1923	29779	67888	57038	115	70	
15	Chintadripet ,	1909	43620	76459	84651	463	90	
16	Pudupakkam ,	1924	30151	69200	80700	199	215	= = = 0
17	Triplicane ,	1918	41071	91954	102701	350	420	
18	Teynampet ,	1927	24828	54670	62718	176	167	
19	Thyagarayanagar,	1922	33054	63715	75459	186		Shifted from
20	Mylapore ,	. 1924	41529	94176	87935	535	583	Pulianthope
21	Pulianthope	1930	24767	62858	67164	125	105	Shifted from
22	Unani Thousandlights	1020	29260					T. Nagar
<b>2</b> 3	(Ayurvedic), Thayar Sahib	1932	31481	34783	55908	308		
24	Street (Unani) , Egmore ,	1923	19309	69355	70976 65123	41 15		
25	TT . 1	, 1938 1938	41329 21497	91446 51377	79416 56240	98		
26		1031	58684		128469		188	
27		1020			71266	190		
28	Pudupet Unani	, 1959	20000		12000	100	200	

STATEMENT No. II

MEDICAL RELIEF

Showing skin and leprosy cases treated in the special clinics during 1945

			attendance.		4121	684	197	12774	17776
		Yearly total attendance new and old			49451	8308	2364	153293	213316
	Skin diseases.		No. of injections performed.		629	•	•	:	£69
	Skin		No. of new skin cases.		15417	2512	2358	83306	103593
			No. of injections performed.		4816	3569	:	:	8385
		Lt.	Otherwise,		08	31	•		122
	Details of Leprosy work.	Results of treatment.	.oM condition 'beteetia'		12	4	•	•	16
	solder	s of tr	Motom symptom free.		18	က	:	:	21
	of I	esulta	No. improved.		140	92	. :	•	216
	etaile	- H	No. cured.		•	•	•	•	:
	D	Types.	-no M .evitoetni		181	87	:	:	268
		Ty	Infective.		69	22	:	<del>-</del>	97
		Veo	New lepr		250	114	:	H	365
		Date of	opening.	,	2-2-,34	4-8-'31	15-8-'44	:	
,		Name of		Ice House Road Skin & Leprosy	Clinic	Vyasarpady Leprosy Clinic.	Teynampet Leprosy Clinic.	Other Corporation Dispensazies	Total

Showing the number of cases admitted, discharged and died during 1945 in the I. D. Hospital, Tondiarpet, Madras.

STATEMENT No. III

	Total.	55	3161	2688	397	12.34%		132
	Other diseases.	o .	407	326	74	18%		16
	Dengue.	:	18	18	:	•		:
	Ohronic enteritis.	:	53	17	12	41.38%		•
_	Ohronic sitistis.	:	•	:	:	•		:
	.eireleM	•	. :	:	:	:		•
	Pneumonia.	:	37	25	12	32.70%	Ì	÷
	Secondary Syphilis.	:	88	38	:	:		
-	Diphtheria.	-	12	12	H	%69.2		:
	G. S. Meningitis.		12	G	જ	16.67%		Н
	Whooping cough.	:	က	က	:	•		:
	·sdmuM	<del>perl</del>	48	47	:	:		23
	Gastro- enteritis·	:	998	231	35	13.16%		. :
	Cholera.	9	105	81	30	27%		:
	.eslessM	ಒ	141	144		%2.0		
	Оріскеп рох	ಸಂ	787	725				29
	Small pox.	53	1268	1022	230	17.7%		45
	Details.	Patients in the hospital on 31st December 1944 midnight	Patients admitted for treatment from 1st Jan. 1945 to 31st Dec. 1945	Total number discharged.	Total number died	Mortality percentage	the hos	on 31st December 1945 midnight

		rks.	Rems		
No. I		Total of ntrants & regulars.	.eZeti	Percer	21000000000000000000000000000000000000
ŒNŤ		Total centrants regular	. evite.	No Defec	696 1038 1048 1048 1048 1048 1132 132 1492 1492 1492 1492 1492 1492 1492 149
STATEMENT	-	rs.	Percentage.	1944-45	10.35 10.35 10.35 10.35 0.03 0.03 0.03 0.03 0.30 0.30 0.30
	irls.	Regulars	Percei	1945-46	1.04 1.04 1.04 1.016 1.18 0.01 0.01 0.01 0.59 0.59 0.59 0.59 0.70 0.59 0.70 0.70 0.70 0.70 0.70 0.70 0.70 0.7
	Gin			Defec	416 694 739 739 86 86 1 1 1 1 90 43 26 1 952 53
_		ıts.	Percentage.	1944-45	6.17 3.00 5.95 6.92 1.17 0.15 0.062 0.062 0.042 0.26 0.15 17.92 3.90 1.96
-		Entrants	Perce	1945-46	6.16 1.96 7.57 6.80 0.86 0.04 0.57  0.92 0.37 0.37 0.29
			o, otive.	N Defe	280 89 344 309 309 309 119 113 113 540 36
		Total of entrants & regulars.	.egstn	Perce	
1945-46		To enti	c,		3069 875 2265 973 416 24 129 129 105 105 1158 319
194		ars.	ntage.	1944–45	20.18 22.30 9.45 9.45 23.30 0.17 1.07 0.03 0.01 1.24 0.01 0.77 3.17 0.10 22.84 4.13
	Boys.	Regulars	Percentage	1945–46	21.03 16.67 6.24 2.97 0.05 0.05 0.03 0.51 3.34 0.07 11.13 2.12
	Bo		lo. ctive.	I -	1529 1380 1212 2454 216 69 30 30 37 243 809 154
		ts.	Percentage.	1944-45	28.39 14.22 21.27 9.88 1.78 0.01 0.09 0.09 0.09 0.09 0.01 0.01 0.16 0.25 0.25
		Entrants.	Perce	1945-46	21.84 7.02 14.93 7.36 0.28 0.28 0.01 0.03 0.96 0.58 3.77 0.10 10.99 2.34
			Vo.	Defe	1540 495 1053 1053 200 200 60 60 68 88 88 88 777 775 165
MEDICAL INSPECTION		•	Defects.		Malnutrition Dirty head, body & nails Teeth & mouth Nose & throat Eye diseases Vision Ear diseases Hearing Speech Circulatory system Tuberculosis Respiratory system Abdominal organs Bones and joints Nervous & psychic system Infectious & contagious diseases Other diseases and defects Vaccination Deformities
M			No.	1	100.47.00.00.01.01.00.00.00.00.00.00.00.00.00.

MEDICAL	INSP	ECTIC	N		A	PPENI	IX TO	STAT	EMEN	T No. I
Group.	No. or	Roll.	da	rage ily lance.		To.	No. de	fective		entage ective
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	
Entrants Regulars	16714	14420	13351	11541	7051 7271		3207 3282			
Total	16714	14420	13351	11541	14322	11821	6489	4818	45.29	40.76
MEDICAL	INSP	ECTIC		Treatm	nent Ta	ble	3	STATE	EMENT	No. II
Group.	No. treated at Schools.	T O	on dispensaries.	No. referred to Go- vernment Hospitals	No. referred to Fovernment Oph- thalmic Hospital.	No. referred to Tuberculosis Institute.	No. of parents met.	h	re-examinations of Children.	No. of Special examinations of Childern.
Boys Girls	3337 1505	19	58	1116 1179	34 9	ï	2758 1229	282 157	5419 3300	24350 11985
Total	4842	37	77	2295	43	1	3987	439	8719	36335
MEDICAL	INSP	ECTIC		nt and	Weight	t Tables		rate <sub>N</sub>	MENT :	No. III
Age.		rage ht in nes.		rage ht in nds.	averag	quenni se heigl nches.	at ave	uinquen orage w n poun	reight	Remarks.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls	. Bo	ys.	Firls.	
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	41·56 41·50 42·98 45·36 47·08 48·03 49·89 51·63 52·98 53·83 55·25 60·44 58·39	40.69 42.77 44.11 47.02 49.24 51.06 52.76 54.99 56.42 58.14 59.50	35·88 33·99 36·38 38·71 42·01 45·84 49·61 52·46 56·42 58·71 61·97 63·51 80·64	32·19 34·45 36·44 40·64 43·77 49·69 54·17 59·52 66·94 69·65 89·46 88·00	40·47 41·26 42·94 44·94 46·74 48·83 50·27 51·89 53·15 54·93	39·25 40·99 42·61 45·33 47·30 49·19 51·39 53·08 55·04 56·88 58·12	33° 36° 38° 42° 46° 49° 54° 57° 61°	30 28 91 96 23 66 23 06 10 90	29·51 31·02 33·48 37·32 41·24 45·81 61·42 68·19 60·89 9·56 66·21	

#### SANITATION

#### STATEMENT No. I

Showing the progress of sewer laying work during 1945

Serial No.	Name.	6" S.W.P.	9" S.W.P.	12" S.W.P.	7" C.I.P.	9" C.I.P.	12" C.I.P.	15" C.I.P.	Man-holes.	House connections.	Ventilating columns.	Remarks.
-		L. ft.	L. ft.	L. ft.	L. ft.	L. ft.	L. ft.	L. ft.	Nos.	Nos.	Nos.	
1	Theagaroya Nagar area	369	•••	•••	• • • .	219	•••	170	•••	•••	•••	
2	Adyar area	•••	1967	•••	515	338	8	•••	12	•••	12	
3	Kilpauk area	549	1626	•••	•••	•••	•••	••••	14	•••	•••	
4	Purasawakkam area	4784	2918	•••	•••	•••	•••	•••	45	393	•••	
5	Ice House Road		324	739	•••	•••	•••	•••	4	•••	•••	
6	Tondiarpet area	353	172	•••	•••	•••	•••	•••	6	•••	•••	
7	Royapuram area	780	363	•••	•••	•••	•••	•••	9	• • • •		7.6
8	Law College and Wall-tax Road area	170	302	•••	•••	•••	•••	•••	. 4	•••	•••	*
9	North Mylapore	398	•••	•••	•••	••	•••	•••	3	17	8	
10	Chetpet area	676	139		•••	•••	•••	•••	7	•••	•••	
11	Napier Park area	90	•••	•••	•••	•••		•••	3	8	•••	
12	Greames Rd. area	478	•••	••	•••	•••	•••	•••	•••		•••	
		8647	7811	<b>73</b> 9	515	5 <b>57</b>	8	170	107	418	20	

Total length of sewers laid during the year 1945=18,447 feet or 3.49 miles.

#### SANITATION

#### STATEMENT No. II

#### Showing disposal of applications for licences in 1945

Aerated water and Ice Factories	Serial No.	Description of trade.	No. of cases dealt with.	No. Sanctioned.	No. Refused.	No. Pending.	Remarks.
Rosin	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Bakery, Sweetmeat and Coffee hotels. Candles and Soaps Cocoanut fibre, Hemp and Jute Cattle-yards Bones, Hoofs, Hair and Wool Cart-stands Dairy produce Flour Gilding and Condiments Hack-stables Dyeing Onions and Garlic Oil and Oil Mills Lodging houses Markets Meat	1512 36 23 1817 42 31 301 154 67 30 121 273 637 65 37	1386 32 19 1501 39 26 283 153 65 27 119 267 614 57	4 296 3 5 18 1 2 3 2 6 23 4	20    4	
Total   15541   14682   834   25	19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37	Rosin Laundries Fish and Fins Skins, Hides and Leather Paddy boiling Sugar Catgut, Offal and Tallow Snuff Cotton Eating houses Swine Lime kilns Beedy manufacturing Manufacturing Cigars & Cigarettes or storing tobacco Camphor storing and boiling Shaving Saloon Husking of paddy Groundnut storage Grains storage Gold refining Poultry	283 83 304 10 9 13 257 294 2939  41 1216 653 1976 10 412 916 4	280 80 296 7 7 12 251 282 2814  40 1182 617 46 1941 10 396 898 4 21	3 8 3 8 3 2 1 6 12 125  1 34 35  16 18 		

STATEMENT No. I

APPENDIX

WATER ANALYSIS

-5%									
	Remarks								
	Number of samples examined	973	185	- <b>*</b>	. 32	28	14600	3507	19365
Showing the examination of water samples in 1945	Description	Complete bacteriological and chemical examination	Partial bacteriological and chemical examination	Microscopical examination of water from different places in the water supply system	Identification of Algae	Culture media, etc., for determination and adjustment of pH	Samples of water tested for the presence of free chlorine, interfering substances, etc.	Examination for the presence of H2S in filtered water samples	
	Number		<b>&amp;</b>	ಣ	4	ಬಂ	9	2	4

Chlorination data for 1945

STATEMENT No. II

Average No. of beds			10	10	6	· 0	10	11	10	10	10	10	ĵ 5	, <b>5</b> ,	
Total A cost of chlorine.		Rs. a. p.	10	4583 14 6	€5	~	9	₩.	11	11	0	~	ص.	12	58,840 10 2
Cost of chlorine per lb.		Rs. a. p.	0-10-6	33	:	: :									
Lbs. of liquid chlorine	. pesn		7553.00	6985.00	7774.75	7426-25	7750.75	7477.50	7440.35	7568.30	7378-30	7682.25	7278.00	7347.50	89661-95
orine n.	Mean.		1.06	1.09	1.06	1.03	1.05	86.0	0.98	0.98	1.03	1.03	1.05	1.00	1.05
of chlorine p. p. m.	Min.		0.99	1.04	1.05	0 97	0.93	06.0	0.91	0.04	0.61	1.00	1.00	86.0	
Dose	Max,		1.10	1.14	1 09	1.10	1.16	1.04	1.04	1.02	1.06	1.10	1.06	1.03	
water nillion day.	Min. Mean.		22.75	22.81	23.20	23.50	24.53	25.36	24.46	24.91	24.12	23.86	23.54	23.62	23.91
Quantity of water filtered in million gallons per day.	Min.		22.00	21.66	99.22	35.66	23.50	24.20	53.66	24.00	23.00	23.16	35.66	23.00	
	Max.		24.00	23.66	24.66	24.66	26.20	99.97	99.92	52.66	25.33	24.66	52.66	24.66	
No. of sam- ples of water tested for free chlorine and for	interfering substances.		1240	1120	1240	1200	1240	1200	1240	1240	1200	1240	1200	1240	14600
Month.			January	February	March	April	May	eun f	July	August	September	October	November	December	Average

Service taps in the distribution STATEMENT No. III Percentage reduction 9.98 22.8 8.5 37.9 32.8 33.8 28.5 6.02 27.8 43.3 41.0 Percentage reduction of organic matter (Tidy's 4 hours test) at the different stages of the water purification system system. oxygen in Absorbed parts per 100,0000.110 0.084 0.1220.160 0.110 0.104 0.080 0.105 690.0 0.000 680.0 0.094 Test tap on the rising Main Percentage over R. W. reduction at the Pumping Station. 32.9 35.9 31.2 35.0 31.7 34.6 40.3 29.1 37.3 33.9 30.4 29.1 oxygen in Absorbed parts per 660.0 660.0 920.0 0.100 0.108 0.124 0.117 100,000. 0.082 0.086 0.074 0.089280.0 Percentage over R.W. reduction Filtrates from beds. 32.5 29.2 28.2 25.6 27.2 36.3 28.0 29.4 21.7 27.7 31.1 36.1 oxygen in Absorbed parts per 100,000640-0 660.0 620.0 0.098 0.126 0.125 0.094 0.103 0.105 0.093 0.111 0.101 Kilpauk end Raw water oxygen in parts per Absorbed 100,0000.175 0.125 0.120 0.136 0.124 0.139 0.144 0.158 0.177 0.117 0.161 0.141 WATER ANALYSIS Month. September November December February October January August March June April July May

APPENDIX

Bacteriological results—Percentage averages

1945				Red	l Hi	lls La	ke.					I	law Wa	iter.				Cl	nlorina	ted Fil	tered	Wate	r Mix	ture.			Test-	Тар,	К. Р.	S.				Г	Distribu	ution s	ystem	taps.		
		Samples.		La	ctos	o ferr	nenter	s in		mples		I	actose	fermer	nters in	n		Samples.		Lact	tose f	ermen	ters in	1	mples.		Lac	etose :	ferme	nters i	n		mples.		La	ictose :	fermen	ters i	n	
Month.		No. of Sa.	-60 c. c.				+ 5 c. c.	+1 c. c.	+0·1	No. of Sa			+20 +1 c. c. c.			1 + c. c.		No. of Sa	—60 c. c.					$\begin{vmatrix} +1 \\ c. \end{vmatrix}$ + 0°		—60 c. c					+1 +0	)·1 c.	(C) 1		+60 c. c.	+20 c. c.		+5 c. c.		
January	•••	6		••		20.0	60.0	20.0	• • •	24		•••	8.3	41:	6 46	1 4	1	25	100	, • • •	****	•••	••• .	••	25	100	•••	•••		•••	•••		10	80.0	10.0	10.0	•••	•••	•••	•••
February	• • •	•••	•••	••		• • •	• • •	• • •	• • •	21	•••	•••		71.4	28	6	••	22	95.5	•••	4.5	•••	•••		43	100		•••	•••	•••	•••	.   :	12	58•4	25.0	8.3	8.3	• • •	•••	•••
March	•••	•••				•••	• • •	• • •	•••	22	•••	4.5	•••	27.4	63	6 4	•5	22	100	•••		•••	•••	••	46	100	•••	•••	•••	•••	•••	.   ]	12	91.7	8.3	•••	•••	•••	•••	· • • •
April		5	•••	••	•	40.0	40.0	20.0	• • •	23	•••		8.7	21.8	69	5	•	22	100	•••	•••	•••		•••	46	100	•••	•••	•••	•••	•••	.   ]	12	83.4	8.3	8:3	•••	•••	•••	•••
May	• • •	•••	•••	•••	•	• • •	•••	• • •	• • •	24	•••	•••	8.2	45.8	45	9	••	24	87.5	12.5	•••	•••		••	36	100	•••	•••	•••	•••			10	100	•••	•••	•••	•••	•••	•••
June	• • •	• • •	•••	•••		• • •		• • •	~••	24		•••	4.2	41.7	54.	1	••	24	100	***	•••	•••	•••	••	42	100	•••	***	•••	•••	•••		11	45.5	45.5		9.0	•••	•••	•••
July	•••	5		••	•	•••	40.0	60.0		25	•••	•••	• • •	28.0	72.	0	• •	24	87.5	12.5	•••	•••		••	37	75	7 24:	3	•••	•••	•••	•	10	30.0	40.0	30.0	•••	•••	•••	•••
August	• • •	• • •		••	•	•••		• • •	• • •	22	***	• • •	4.6	22.7	72	7	••	22	100	• • •	•••	•••	•••	•••	40	75	25	•••	•••	•••	•••		12	25.0	50.0	25.0	•••	•••	•••	•••
September	• • •	5	•••	••	•	•••	60.Ò	40.0	•••	22	• • •	- • •	•••	• • •	100	6	•	21	100	• • •	•••	•••	•••	•••	31	58	1 41:	9	•••		•••		10	60.0	40.0		•••	•••	•••	•••
October	• • •	•••	•••	• •	•	•••	• • •	•••	•••	25	•••	•••	• • •	16.0	84	0	•• [	25	100	***	•••	•••	•••	•••	32	62	5 37	5	•••	•••		•	11	18:2	27.3	54.5	•••	•••	••••	•••
November	•••	• • •		•••		•••	<b></b>	•••	•••	24	•••	• • •	• • •	37:	62	•5	• •	24	91.7	8.3		•••	•••	••	33	84	8 15:	$2 \mid \dots$	•••	•••	•••	•	12	58•3	8.3	•••	25.0	8.4	•••	•••
December	•••	•••				•••	•••	•••	•••	20		•••	5.0	50.0	45	0	••	20	90.0	10.0	•••	•••	•••	•••	28	89	3 10.	7			•••	•	10	90.0	10.0	•••	•••	•••	•••	•••

#### SIST.IAVA ROTAW.

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Important Chemical Results (In parts per 100,000)

STATEMENT No. V

1000		
System	Absorbed oxygen	0.069 0.094 0.089 0.104 0.102 0.122 0.122 0.160 0.110
	bionimudlA negortiN	0.003 0.018 0.018 0.018 0.022 0.025 0.025 0.025
Distribution	Ammoniacal Nitrogen	0.003
A	seldmss to .oV	08880008080
Š.	Absorbed oxygen	0.076 0.089 0.089 0.089 0.108 0.124 0.124 0.124 0.089
Tap K.P.S.	bionimudlA negortiM	0.004 0.017 0.017 0.025 0.026 0.028 0.028 0.028
Test I	Ammoniacal Nitrogen	0.003
	No. of eamples	88888888888888 88888849888888
ltered ure.	bedroadA negyxo	0.079 0.094 0.099 0.079 0.103 0.101 0.101 0.126 0.126 0.125
ated Filtered er Mixture.	bionimudlA negortiN	0.020 0.020 0.020 0.020 0.026 0.026 0.027 0.027 0.027
Ohlorina Wate	Ammoniacal Nitrogen	0.005 0.005 0.005 0.005
5	soldmas to .oV	<u> </u>
pauk nit,	Absorbed new gen	0.117 0.136 0.136 0.134 0.144 0.141 0.158 0.175 0.175
Raw water Kilpauk end of conduit,	bionimudlA nəgorti <b>V</b>	0.039 0.033 0.033 0.033 0.033 0.033 0.033
aw wa	Ammoniacal negotin	0.003 0.003 0.003
A	selqmss to oN	
ke.	Absorbed negyzo	0.117 0.155 0.159 0.162
Hills lake.	bionimudlA negortiN	0.023
Red E	Isosinomm A negortiN	0.001 
	No. of samples	0 . v . v . v
1945	Month.	January February March April May June July August September October November
4		

STATEMENT No. I

FOOD ANALYSIS

			APP									
4	Percentage of adulterated samples.	45.0	34.8	13.2	6.4	6.9	:	9.11	:	34.3	38.5	20.2
1944	Number of samples analysed.	456	158	658	495	87.	14	69	21	29	13	2038
3	Percentage of adulterated samples.	46.8	31.2	24.3	2.1	•	•	19.3	•	36.1	63.2	25.7
1943	Number of sanysed.	1	189	703	437	116	42	83	30	61	19	2060
[3	Percentage of adulterated samples.	27.1	21.9	28.3	4.8	16.3	4.7	39.9	•	44.4	:	20.2
1942	Number of sanples analysed.	365	123	520	420	86	43	129	. 45	6	က	1755
41	Percentage of adulterated samples.	30.4	34.1	39.3	7.8	18.3	100.0	2.1	•	37.5	36.4	24.3
1941	Number of . besylands	283	94	206	657	153	<del>,  </del>	48	53	<b>∞</b>	11	1990
. 01	Percentage of samples.	31.1	44.1	48.3	6.5	21.5	:	6.6	•	9.69	:	31.0
1940	Number of sandysed.	288	102	773	511	93	$\vdash$	43	37	23	:	1871
	Percentage of adulterated samples.	5.99	20.0	13.7	6.4	6.5	21.2	5.4	:	64.3	2.99	36.3
1945	Number of adul- terated samples.	609	30	62	15	83	<b>∑~</b>	က	:	27	9	761
-	Number of besylans selqmas		150	451	235	31	33	53	ှင်္	52	6	2097
		•	•	•	•	•	:	:	:	:	•	
	Samples.			*								Total
	Nature of	Milk	Butter	Ghee	Gingelly Oil	Groundnut Oil	Cocoanut Oil	Coffee Powder	Теа	Ghee Substitutes	Other Articles	102 LAVI 201

STATEMENT No. II

Average fine per conviction in 1944.		Rs. 577 36 63 89	59
		Rs. 8650 975 711 1240 145 570 550 535 155	14981
Number of convictions in 1944.		151 30 24 28 28 30 30 30 30 30 30 30	254
Average fine per conviction in 1945.		Rs. 53 76 60 855 855 855 855 855 855 855 855 855 85	57
.6461 ni besoqmi senil ls45.		Rs. 28987 960 1520 532 120 60	32289
ber of Ales dea ing 194	-sib gnibneq redmu N 3491-21-18, no Issoq	122 122 123 124	148
	Number taken under Soction 14, out acquitted, withdrawn or not prosecuted.		88
	Vumber seized under Section 9 nd forfeited or destroyed under section 12 without prosecution.	: : : : : : : : : : : : : : : : : : :	19
	Number of convictions.	412 102 103 103 103 103 103 103 103 103 103 103	569
	Number of samples.	69 141 88 188 188 87 7.2 8	867
Adulterated samples of the previous year pending disposal on 1-1-1945.	-sib gaibne redmu M possl on 31-12-1945		:
	umber taken under Section 14, ut acquitted, withdrawn or not rosecuted.	q	24
	9 noitoed reduced under Section of noitoes to heater or destroyed under cotion 12 without prosecution.	ष्ट्र	
	Number of convictions.	250 cm cm : : : : : : : : : : : : : : : : :	88
	Number of samples.	831 - 6 - 1 : :	106
Adulterated samples among the samples analysed in 1945.	-sib guibneq redmuN 3461-21-18 no Issoq	122 105 105 105 105 105 105 105 105 105 105	148
	umber taken under Section 14, ut acquitted, withdrawn or not resecuted.	d 62 cm : 12 : : : : : : : : : : : : : : : : :	65
	umber seized under Section 9 and under destroyed under or destroyed under ection 12 without prosecution.	N : : : : : : : : : : : : : : : : : : :	61
	Number of convictions.		487
	Number of samples.	609 30 622 15 15 15 27 87	761
Nature of samples.		Milk Butter Ghee Gingelly Oil Groundnut Oil Cocoanut Oil Coffee Powder Tea Ghee Substitutes Other Articles	Total

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